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A CLINICAL STUDY OF THE DIAGNOSIS OF URINARY CALCULUS.*

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Diagnosis of Stone in the Bladder.—We are all familiar with the classical symptoms of stone in the bladder. The frequency of urination that is prone to occur in the day time, while the patient is up and about, agitating the foreign body within the organ and increasing the irritation that subsides so markedly when the patient rests quietly in bed (this in contradistinction to the frequency from prostatic hypertrophy that occurs especially at night); the common occurrence of blood in the urine, especially at the end of urination; the characteristic stream, suddenly interrupted by the falling of the stone over the vesical outlet, plugging it completely and at once, permitting the renewal of the stream only when it is floated or jolted out of the way; then the resumption of the full stream, unless again suddenly interrupted in the same manner. When such typical symptomatology is followed by investigation with the stone-searcher, and the click and grating feel are obtained, the diagnosis is certain, and one almost wonders how it is ever possible to overlook or be misled about the diagnosis of a condition so clearly and distinctly defined; and one would hardly expect to meet with a case in which a stone as large as the one I herewith present for your inspection (Fig. 1, No. 34,) had been left in a bladder, unsuspected, only two weeks before I first discovered and removed it; yet such is the fact. The patient was not only assured by the gentleman who had him in charge that his bladder was free of any foreign content, but he was strongly advised against consulting a "specialist," in his search for relief, as a specialist would certainly "want to operate on him, instead of curing him without operation, as should be done."

A brief history of the case is as follows:

Case 1.—G. M. W., male, aged seventy years at the time of first conference

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on October 22, 1903. Some time during 1900 the patient began to note hesitancy and slowness of his stream, together with increased frequency of urination, especially at night. In August, 1901, while at Chautauqua, New York, there was sudden and severe difficulty in urinating, requiring the use of the catheter for a week or more. His condition was then considered so serious that he was sent to Buffalo, New York, where Dr. Phelps opened the bladder supra-pubically and drained it for three months, which secured much improvement. In 1903, at Lincoln, Nebraska, he had another attack of difficult urination, chills, fever, suppression of urine and unconsciousness for twenty-four hours (uraemic?). He was catheterized and irrigated regularly for several weeks, and incidentally was examined by the surgeon in charge, who told patient that there was enlarged prostate, but that further than that the bladder was clear. Two weeks later he came to St. Louis.

When he came to see me he was emaciated, weak, pale, and hardly able to walk. He was passing large quantities of pale urine, 1003 specific gravity, containing much pus and albumin, and several forms of casts. Physical examination showed a very considerably enlarged prostate, about five ounces of residual urine. The soft rubber catheter was obstructed on reaching the prostatic region; but the metal catheter of full curve entered the bladder, and on manipulation detected the gritty feel of a stone of good size.

While it was evident that some operation had to be undertaken to remove the stone, it was also apparent that any endeavor of that kind had to be minimized as much as possible, else the old gentleman would not stand it.

After a week's preparatory treatment, on October 28, 1903, under *local anesthesia*, by means of infiltration fluid, I made a supra-pubic incision into the bladder and removed the large stone which I now present. Its dimensions are 2⅛x1½x1¼ inches, and weight 13 drams and 23 grains. On opening the bladder about two ounces of pus flowed out of the stone-pocket in the upper portion of the bladder. During the operation the patient was, of course, entirely conscious, but the anesthesia was so successful that he did not complain at all, in which respect he was very agreeably surprised, in that he had been very nervous and anxious as to the suffering which he thought could not be avoided.

Nothing was done about the prostatic obstruction at this time, except that it was felt to be caused by a prostatic bar at the posterior commissure. Complete drainage was established by means of two soft rubber catheters tied into the supra-pubic opening, with a continuous stream of saline solution running for the first twenty-four hours, and interruptedly thereafter for a few days. There was no depression from the operation; on the contrary, he became free from pain for the first time in two years, he said, and he was soon sitting up in bed, and then around the room. He visited my office in just three weeks after the operation, and had in the meantime regained much strength and spirit.

With the marked obstruction pre-

sented by the enlarged prostate there was little or no chance of the supra-pubic fistula closing, or of even approximate restoration of the urinary tract to normal; therefore, the effort at clearing up the obstruction was next considered. It was realized that the patient could not withstand much or severe operative interference; and since the obstruction was in the shape of a bar, it was possible that a Bottini incision would accomplish the opening up of the channel. Again, under local anesthesia, on December 8, 1903, a generous posterior electro-incision was made by the Freudenberg cautery; no pain or hemorrhage incidental to it. A few days later there was some gastric reaction, and temperature elevation to 103. The opening of the urethral passage was demonstrated by filling the bladder through the upper opening and allowing the patient to pass it out the normal route—which he did in a good, full stream. Sounds were passed occasionally. With assistance of some renewal of the wound-edges and closure with the French metal stitches, the supra-pubic opening later healed, after which the patient recovered his ability to urinate voluntarily in a full stream and completely empty his bladder. He has been doing this for more than a year, now; has recovered his general health, has taken trips both east and west, and lives in a comfortable manner, as he pleases, free from all urinary troubles.

The overcoming of the difficult conditions by operating in successive steps and without the use of general anesthesia, were both conservative and successful. He would probably not have lived through a more heroic plan of action; and a non-operative plan would not have secured any but temporary benefit, adding nothing to his fast-diminishing lease on life.

Some surprise may be occasioned by the fact that the bladder was sounded and so large a stone as this not found, hardly two weeks before his arrival in St. Louis. It is probable that the sound did not enter far enough into the bladder to reach the stone; that its entrance was impeded by the large lobes and bar of the prostate, leading to the false conclusion that the viscus contained no stone.

The next case related is one that gave me a history strongly suspicious of calculus in the bladder, and with that suspicion in mind I examined with the stone searcher and failed to find the object of the quest; nevertheless, on applying additional methods of investigation I was successful in finding this stone, which I show you, and removed at a later date. (Fig. 1, No. 38.)

This, by the way, is quite a peculiar stone, a stone of crystallization, the whole surface being covered with sharp pointed spiculæ, of pure crystal formation like quartz, and it is no wonder, therefore, that the patient's most urgent complaint was with reference to the severe pain that occurred for fifteen minutes or a half-hour after each urination, often requiring him to lie down for that length of time for relief. The spiculæ acted as so many thorns against the tender and inflamed mucous membrane of the bladder, especially at the end of urination, when the bladder became empty and contracted on them. I have never seen another stone of this formation.

Case 2.—T—e J—n. Aged fifty-seven, male. First conference March 16, 1904. German; married; merchant. For the last three years this patient had suffered from pain in the perineum, both during and after urination, and also on experiencing a jolt or jarring or rapid walking. This pain had gradually increased in severity until the patient could hardly attend to his regular duties. He had not noticed blood in the urine, although he had observed some sediment. He had noticed sudden stoppage of the stream, starting again later after waiting a few minutes, or on walking around the room. He had to urinate frequently, both day and night, but the most emphatic complaint was of the pain directly after urination; also, there was slowness in starting and difficulty in the passage of the urine. There were seven ounces of residual urine at the time of the first examination with the soft rubber catheter which entered the bladder easily. While this history gave rise to strong suspicion of stone, none was felt on introducing the Thompson searcher into the bladder, but when the retrograde cystoscope was placed in the bladder, it showed a beautiful picture of a rough, jagged stone of considerable size, lying deeply in the *bas fond*, behind the posterior commissure of the prostate. When this stone was removed by a perineal incision on March 23d, at St. John's hospital, it was readily seen why so much pain should have been experienced. It was covered with a number of sharp spiculæ, pointing in all directions. It was closely attached to the bladder mucous membrane, so closely in fact that it was removed from its nest with considerable difficulty and danger of tearing the mucous membrane. While it was being removed the finger had to be inserted through the perineal opening to peel the mucous membrane from the stone. It is the roughest stone, and most irritating in its character, that I have ever observed. One can readily imagine the amount of pain that would be occasioned by the contracting together on it, of the bladder walls.

Following the operation there was satisfactory recuperation and the patient has been relieved of his pain and many symptoms, and has regained completely his general health.

In this case, no obstruction was found connected with the prostate, so that no operating had to be done on that organ.

That a stone of moderate dimensions may be of slow growth, and exist a long time without being discovered, the patient meantime passing through the hands of a number of the profession in different parts of the country, is illustrated in the case from whom I removed the accompanying stone. While no difficulties were presented in the detection of the stone by means of the searcher in this instance, and it might have been found as easily by anyone of those who saw the case previously, it is a fact that he had never been examined for stone before his first interview with me.

Case 3.—G. D. R—d, of Keokuk, Iowa, aged sixty-four; banker, American, married. Referred by Dr. Payne, of Keokuk, Iowa.

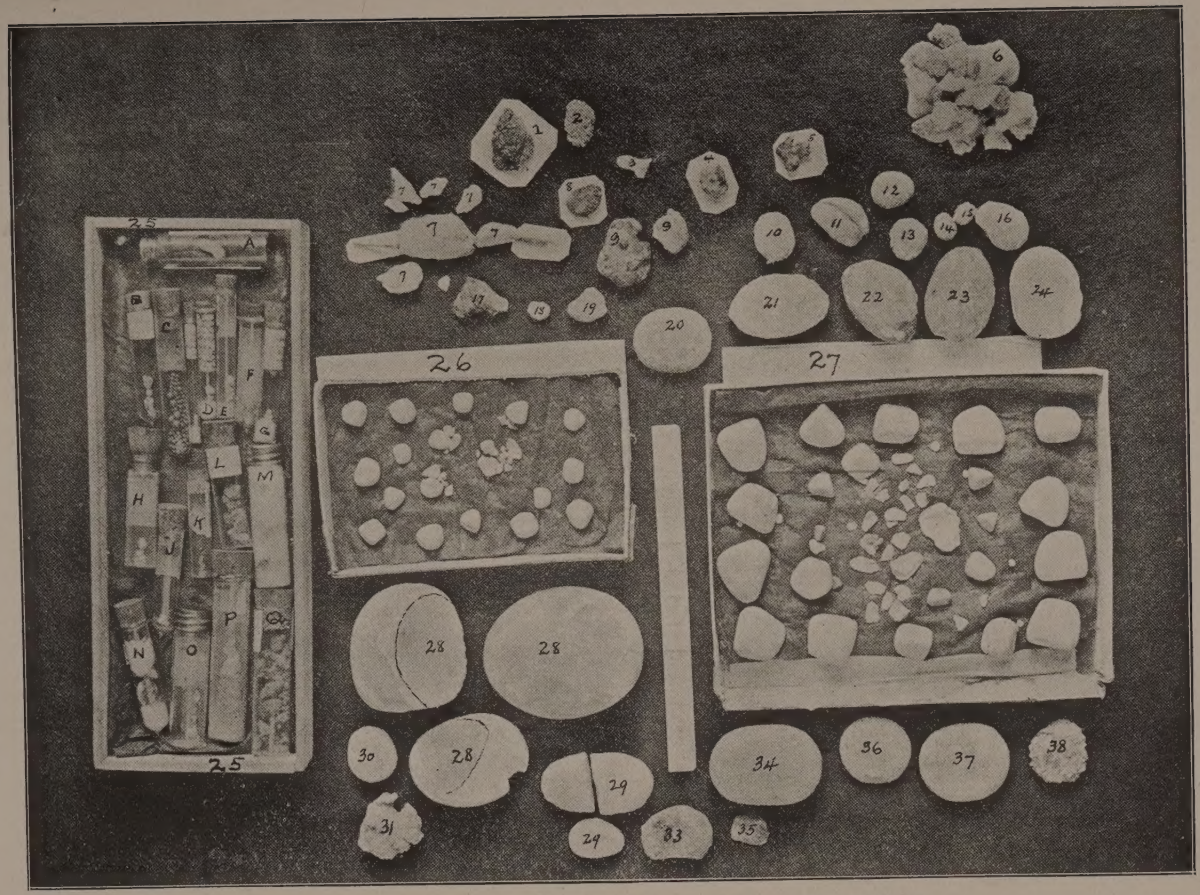

FIG. 1.—Dr. Lewis's collection of Urinary Calculi, reduced to one-fourth natural size.

Symptoms in this case began four years before his first conference with me on July 13, 1903.

The symptoms were initiated by irritation in the bladder, that at first was only temporary, after which there was no trouble for six months, when there was a renewal of the irritative symptoms and clouding of the urine. Then Dr. Payne used boric acid solution as a bladder-wash for a time. Last fall he went to a sanitarium in Milwaukee, Wisconsin, where the bladder was washed regularly over a considerable period. On account of difficulty in urination, he had been using a catheter for the most part of the past year, drawing his urine off from three to six times in twenty-four hours. Physical examination showed no enlargement of the prostate, refuting what had previously been accepted as the diagnosis in this case. The stone-searcher readily came in contact with the calculus in the bladder, clearing up a diagnosis that seems to have been obscure for a considerable length of time. Operation July 13, 1903, by a perineal incision; the finger introduced into the neck of the bladder showed a marked contraction at the bladder neck—to such a degree that I could hardly enter the organ with the finger. To do away with this, the uterine dilator was introduced into the neck of the bladder, and successive stretchings did away with the narrowing at that point. After this, the forceps was introduced into the bladder, and the stone readily removed. (Fig. 1, No. 36.) Double catheter continuous drainage was maintained as usual for twenty-four hours, after which it was interrupted and then removed altogether in about five days. There was union of the wound and prompt recovery on the part of the patient, who regained his health and spirits.

Case 4.—F—k Z—n, St. Louis, aged forty years; engineer; German-American; married. Referred by Dr. H. M. Pierce, of St. Louis. First conference December 4, 1903.

One year previous to his coming, the patient first began experiencing the symptoms which gradually increased until the time of the final operation. They began with frequency and urgency in urination. The passage of urine usually gave considerable relief with the exception of some after-burning. Sometimes he found small clots of blood, but never bloody urine. The pain was most marked in the lower gluteal regions along the bottom of the penis. There was never any pain in the kidney or ureter regions, except one time when there was a sudden severe pain in the left lumbar region.

Three weeks before our first conference, the patient passed five little stones in one morning and three in the afternoon. Then, a week later, five more, and each day afterwards some passed. Altogether, he thinks, about twenty-five small calculi were passed voluntarily. A soft rubber catheter readily passed into the bladder, draining about one ounce of residual urine, cloudy and containing pus and blood. There was excruciating tenderness of the urethra and bladder. A stone-searcher detected a slight but definite stone click. Cystoscopy under cocaine anesthesia revealed a stone with phosphatic incrustations, a stone about the size of a hickory nut.

Under chloroform anesthesia, on December 16, 1903, the bladder was entered through the perineal incision. The neck of the bladder was found to be much contracted and was forcibly dilated by means of the uterine dilator. A stone was readily felt and removed. (Fig. 1, No. 37.) A soft rubber catheter was left in for drainage, after which there was prompt and satisfactory recovery, complete disappearance of the symptoms that had persisted for more than a year previous to the operation, and regaining of perhaps sixty pounds in weight, with considerable improvement in general health.

Case 5.—Chris C—n, of Missouri; aged fifty-eight; German; married; obstructive hypertrophied prostate and multiple vesical calculi.

This is another case in which there was both enlarged prostate with obstruction and multiple calculi, and yet the symptoms began only six months before his first consultation with me. He arrived September 26, 1904. Six months previous he first noticed blood in the urine, and pain in the back in both lumbar regions, radiating forward into the testicles.

At first the attacks of sharp, cutting pains would last only a minute or two, but later they became more severe and more prolonged, finally rendering him unable to pursue his work. At one time he passed two small stones through the urethra, and a week later he passed another stone. He gives the history of sudden stoppage of the stream in the course of urination. This history was very strongly suspicious of stone in the bladder, and yet when I put the Thompson searcher into the bladder I could feel no click. I tried the same with the bladder empty, and later while it was filled with fluid, but in neither case could I detect the click of the stone. It was observed, however, that the searcher was rigid and badly borne, so that perfect examination with this could not be carried out. Under cocaine anesthesia, the next day at the Deaconess Hospital, examination by means of our retrograde cystoscope showed as plainly as could be, stones in the bladder, the largest the size of a pigeon's egg.

On October 6th the perineal incision was made into the bladder, and the prostate was first attacked. It was found to be exceedingly dense and hard, and no point of cleavage for enucleation could be discovered; consequently it was fairly tunneled through by means of biting forceps and periosteal elevator and scissors. Finally, a good-sized channel was made through the prostate, after which, by means of a stone scoop and forceps, three stones were found and removed from the bladder. (Fig. 1, Nos. 18 and 19.) Double drainage was maintained continuously for the next twenty-four hours. There was gratifying and rapid improvement, with no tendency towards contraction of the prostate urethra.

The patient within three weeks was passing a good, free stream, and completely emptying his bladder, leaving no residual urine therein. He returned to his home entirely comfortable, and his general health has improved accordingly since that time.

My failure to detect the stones in this case with the searcher was due mainly to the interference offered by the prostate in the rigidity with which

it held the instrument, and also the acute tenderness of the urethra and bladder. Under chloroform anesthesia it is probable that they would have been felt by the searcher. It is worthy of note, however, that the retrospective cystoscope, which showed the stones plainly without touching them, did so without chloroform anesthesia. Under proper precautions the use of the cystoscope is not attended with more pain than that incident to the passage of a metal sound. The searcher is not more painful *in its passage*, either, but to be effectual for its purpose it must have freedom of movement within the bladder; it must *feel* the object, whereas the cystoscope has but to bring it within the field of vision from afar, so to speak.

Case 6.—J. D. M—e, St. Louis; male, aged fifty-five; American; married. Referred by Dr. Wheeler Davis of St. Louis. First consulted me January 1, 1905.

Notwithstanding the large number of calculi found in this patient's bladder, when he was examined, the symptomatology, as described by him, began only six months before the time of his first conference with me on January 1, 1905.

He first noticed difficulty in urinating, together with undue frequency of the act. He soon found it necessary to use a catheter, and, for three months, he had been using it three or four times daily. Two months before he had found three small pieces of stone in one day; none since that time. There had been no blood in the urine.

Five weeks ago, while driving a wagon, he was hit by a street car and knocked forty to fifty feet, since which time the bladder symptoms have been more severe than previously.

A soft rubber catheter was daily introduced into the bladder and drained four ounces of residual urine. A metal instrument readily gave the stone click. The retrograde cystoscope showed as many as six calculi, although we were unable to say whether there were more than that in the bladder.

On January 4th, under chloroform anesthesia, a perineal incision was made into the bladder, the neck of which was stretched with a uterine dilator, after which, by means of curved stone forceps, stone scoop, etc., eighteen calculi were rapidly removed from that organ. (Fig. 1, No. 26.) The stones varied from the size of a pea to that of a hazelnut. At the same time it was noticed that the prostate projected into the bladder from the posterior and lateral aspects, and these parts of the gland were removed through the same incision. Continuous irrigation by two soft rubber catheters was kept up for the first twenty-four hours.

The patient rapidly improved, and within two weeks was feeling better than he had been for a number of months previous to the operation. He had at the time of his first consultation been meager and weak, and possessed of very bad color. A month later he had improved in all these respects, and he has gone back to his work. The perineal opening has healed, and he has gained thirty pounds since the operation.

The next case to be related is remarkable from several standpoints. He had a remarkable number of

stones, of considerable size, in his bladder; was the subject of obstructive hypertrophy of the prostate to a marked degree; and was humpbacked (kyphotic) to an extent that, in connection with his generally debilitated health, seemed almost to preclude any sort of operative interference; and, finally, after having opened the perineum, and taken out a number of stones from the bladder—having a direct avenue of approach through this perineal opening—by using the sound or stone-searcher I was unable to feel them, although there were *five more stones in the bladder at the time!*

Case 7.—W. S. McC., aged fifty-five; traveling salesman. When he arrived for first conference, the patient was so debilitated and nervous that, practically, no examination could be made; he was, therefore, simply questioned and referred to the hospital, where he recuperated under the internal and local antiseptic measures applied and the rest he was made to take, after which a sound introduced readily gave the stone-click, and the cystoscope disclosed multiple calculi—so many that I hardly believed the evidence it gave. An x-ray photo was taken by Dr. Carman, which shows the stones *en masse*, about the size of a closed fist.

On August 5, 1904, under chloroform anesthesia, the bladder was opened through the perineum, the prostatic urethra and vesical neck were dilated with the uterine dilator, after which, in addition to several stones presenting, the finger readily discerned three large, globular projections of prostate into the organ. While the removal of the prostate at first would undoubtedly have given better access for the removal of the stones, it was deemed necessary to be as conservative as possible, in view of the low vitality of the patient, and on that account the prostate was not attacked at that time. With scoops and forceps and fingers, about a dozen calculi were raked out of the bladder, one, two or three at a time, whereupon no more could be felt, either with the finger or the scoop. A stream of warm water was then run rapidly into the bladder, swelling it out, and as the water returned, bringing more of the calculi within reach, they were removed in a similar manner. This was continued until about twenty stones had been gotten out, when no more could be felt, even after several washings.

The washings and manipulations had consumed something like thirty or more minutes; it was not considered advisable to expend any further time in operative measures, even though it could not be determined positively that no more stones were left. A continuous stream of saline solution was kept running through the two-way drainage apparatus for the next twenty-four hours. There was no undue bleeding, no rise of temperature; and recuperation was as prompt as could be desired. A few small pieces of stone were washed out in the irrigations that were made daily in the next two weeks. Through the perineal opening a sound was inserted, but no stones were felt.

On August 20th, under cocaine anesthesia, the retrospective cystoscope was introduced through the same opening, and as pretty a picture was presented as one would wish to see, viz.: five little stones, lodged as if in

a nest, underneath the overhanging posterior lobe of the prostate, in a position in which they could hardly be felt with a metal instrument, even though sharply curved. (Fig. 2.)

On August 23d the patient was again put under chloroform anesthesia, the perineal wound enlarged, the interfering posterior lobe of the prostate shelled out, and the balance of the calculi scooped out.

Recovery from this operation was as prompt as from the other, and the patient went to his home, in Illinois, on September 8th, and shortly afterwards entered on the discharge of his duties as traveling man.

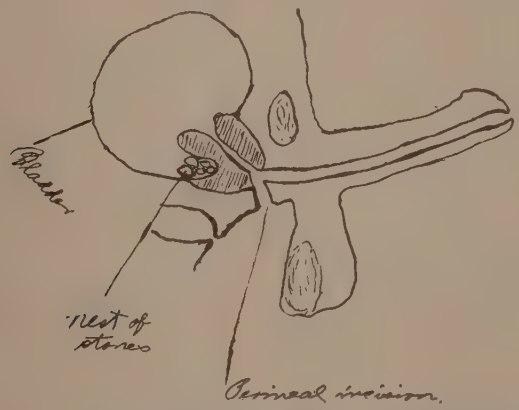

FIG. 2.—Five calculi in a nest under the projecting lobe of the prostate, shielded from the sound but visible with the author's retrograde cystoscope.

Successive visits showed that he recovered his ability to urinate with satisfaction (almost a pleasure, as he put it), and to completely empty the bladder; and the various symptoms of irritation all disappeared.

The total number of stones removed from this case was twenty-eight; in size varying from that of a pea to that of a pigeon's egg. (Fig. 1, No. 27.)

I have observed reports of a larger number of *small-sized* calculi being removed from the bladder, but I am not familiar with a case in which so many stones of considerable size were found in one bladder. Bangs and Hardaway say (page 417): "There are rarely more than five or six stones found, but cases have been reported in which three or four hundred small calculi have been met with." Keen, in 1893, removed four hundred and ninety-five very small calculi, the largest of which ranged from twenty-six to thirty-two of the French catheter scale.

Before leaving this subject I wish to quote from Mr. Bruce Clark, who says (*British Medical Journal*, May 13, 1899): "There are no differential diagnostic symptoms which separate this condition from ordinary cystitis. The difficulties in the way of diagnosis are enhanced by the fact that wash-

ing out of the bladder is quite sufficient, in many instances, to temporarily restore the urine to a healthy condition. In several cases the stones have been so thickly covered with mucous that they did not give an audible sound when struck with an exploring instrument. The fact that the presence of the stone was not known in half the cases operated upon and the difficulties that lie in the way of diagnosis, lead me to advise suprapubic cystotomy and exploration in all cases of cystitis that become chronic and rebellious to treatment."

If, now, we have learned by sad experience the necessity of adopting all of the accredited modes of research for stone in suspected cases—we have studied the history, have used the searcher and the cystoscope, and have failed to find evidence of stone in either the bladder or urethra, have we then fulfilled all the demands for comprehensive exploration that a chronic urinary case requires? What of the upper urinary tract? Or even of the lower? We have not excluded either of them. With respect to this question as it pertains to the lower tract, the following case teaches a forcible lesson; while it is not one strictly of calculus formation, it is so closely allied to it in its effects, if not in its nature, that it is related here:

Case 8.—Fr. L—d, grocer, aged forty-two years; was referred to me by the late Dr. T. F. Prewitt. The patient had pursued for sixteen years the endeavor to learn the cause of his urinary troubles, and had faithfully carried out many and various forms of treatment for their relief, but to no purpose. For all of this period of sixteen years he had suffered from pain in the bladder, perineum and urethra, severe burning in connection with urination; frequency of the act; recurrent chills and fever, evidently septic; and the urine was always heavily loaded with pus, and occasionally with blood.

At the time of our first conference, in July, 1900, while I did not discover the exact origin of the trouble, I advised what would have led to its discovery had it been adopted, that is, perineal section for exploration and drainage of the long-inflamed bladder. The patient declined any operative plan, desiring to be cured by medicines only.

We saw nothing further of him for three years, during which time he experienced the same disturbance to urination, and pain and recurrent fevers and chills, and other indications of urinary sepsis.

In June, 1903, he came back again, under the advice of Dr. Prewitt, declaring that he was ready and willing to undergo any necessary form of treatment to get well of this harassing condition, which had troubled him for at least sixteen years.

The 22d of this month, after some preliminary treatment internally and locally with chloroform anesthesia, I incised the urethra through the perineum, running my finger into the prostate urethra, feeling the little sharp formations, which on being taken out with the forceps and curette, were found to be the three little bony spiculæ that I show herewith. (Fig. 1, No. 25. M.) They were located in the substance of the prostate, on the posterior aspect of the urethra. They were thought at the time to be calcareous formations, and it was only

afterwards, under careful examination that their true nature was learned.

When he awakened from his anesthetic condition, we learned that sixteen years previously he had met with some accident by which he received a severe contusion of the left hip. An abscess developed in the thigh, which was opened by Dr. Prewitt. There was a discharging sinus for a considerable length of time thereafter, and numerous pieces of bone emerged through the opening, which finally closed. A year after this some urinary symptoms made their appearance, and they continued until the time of the operation which we made in 1903. Evidently some of the spiculæ had wandered from the injured bone, and fifteen years previously had migrated into the prostate and set up the irritation of the prostate body and urethra, that had never discontinued until removed by our operation. Now, later, we learned that this did not embrace the whole of the trouble. While the various urinary symptoms disappeared on his recovery from the effects of the operation, the urine remained purulent, indicating that the infection had extended up into one or both kidneys, giving rise to suppuration there.

I wished to make investigation with reference to this point, but the patient felt so much improved that he did not wish to undergo further investigation, and we have never yet learned the extent of the involvement of the kidneys in the trouble; nevertheless, he has regained his general health to a very gratifying degree. He suffers no more from the frequency and urgency of urination, and pain and septic fevers, etc.

Upper Urinary Tract.—With reference to involvement of the upper urinary tract, it is necessary not only to determine the existence of a stone at some point, but it is equally as incumbent to locate it definitely—as to whether it is on the right or the left side; in the ureter or the pelvis of the kidney, of one side or the other. The number of stones and their size are also of importance as having a bearing on the measures determined on for their removal.

The methods for arriving at these results relate to a close study of the symptomatology and, more important still, physical examination of the patient, embracing analysis of the combined and the separated urines (from the respective kidneys), palpation, cystoscopy, ureter-catheterization and the use of x-ray photography.

While stones in the upper tract have certain symptoms and signs more or less characteristic and indicative of their presence, these should not always be expected; they are entirely lacking in some cases, and surprisingly eccentric in others. It is well established that a stone located in the kidney pelvis or the ureter may present its most urgent indications in the bladder or even in the opposite kidney; and it is also a sad fact that many a stone is born to blush unseen and undiscovered in the kidney until disclosed on the post-mortem table—an embarrassing testimonial to the fallibility of man and his scientific methods. I believe, however, that the lack of application of these methods will explain this occurrence much oftener than their failure to do good service when ap-

plied. I have in mind a case in which I hold myself seriously at fault in having failed to make investigation (ureter-catheterization) of the upper tract because I found what seemed to be enough trouble in the lower tract to account for the urinary symptoms presented.

Case 9.—A. L. G—r, aged fifty-five. First consultation June 20, 1904; referred by Dr. Amberland.

This case was a very complicated one, and obscure in a number of respects. There was much discussion among neurologists who had been consulted as to whether it was one of traumatic neurosis or of pure neurasthenia. The history of trouble dates from June, 1901.

While traveling through Kansas on a railroad train, there was an accident in which he received a severe jolting while lodged between the seats of the car, and a severe contusion of the left hip. Nevertheless, he went to work shortly afterwards.

In the fall of the same year he first began to have trouble with the bladder, and consulted his physician, who interpreted it as being some form of prostatic irritation. In 1902, he experienced a general nervous collapse, which continued during that year and 1903. There was inability to control his thoughts, to continue his work; there were pains in various parts of his body, in the right hip and the left side, and also severe pain in the bladder. He suffered so much about that time that hypodermics of morphia were used a number of times. He tried the use of the catheter for awhile, but obtained no relief. He consulted physicians and surgeons in New Orleans and Milwaukee, and neurologists in St. Louis.

Later he became unable to empty the bladder, and gradually developed from twenty or more ounces of residual urine. The urine became very foul and dense, filled with pus and highly colored. There was excruciating sensitiveness of both urethra and bladder, and the slightest manipulation was borne with great difficulty. No physical obstruction in the urethra was encountered except slight impediment to the catheter just at the neck of the bladder. The lens cystoscope could not be used with any satisfaction, because of the active bleeding within the bladder and the clouding of the fluid medium. The operative air-cystoscope was therefore used, when it was noticed that a diverticulum led from the posterior wall towards the fundus of the bladder, the opening of which was apparently the size of a quarter of a dollar, and the capacity of the sacculation sufficient to hold one or two ounces of fluid. The cystoscope could not be made to reach into the diverticulum, because of the dilated condition of the main cavity of the bladder.

Because of the patient's very bad condition generally, his extreme sensitiveness locally, and the bad condition of the bladder in connection with the sacculation of that organ, it was not considered advisable or necessary to catheterize the ureters, and no further cystoscopic examination was attempted. The conditions already mentioned were considered sufficient to account for the urinary symptoms, so that it was considered inadvisable to pass the catheters into the ureters.

The patient was treated with bladder washes and dilatations of the neck of the bladder, notwithstanding which he made no improvement. Conferences were had with other physicians who were unable to shed any light on the case. No complaint directly referable to the kidneys was made at any time. There was gradually increasing debility, recurrent fever, occasional chills, loss of weight and appetite.

Post mortem examination showed sacculation of the bladder as above detailed; chronic cystitis, but in addition thereto, something that had not been discovered before, namely, a stone in the substance of the left kidney, with consequent pyelo-nephritis and dilatation of the right ureter and kidney pelvis, probably resultant from the backward pressure from the contracted condition of the neck of the bladder.

The error in this case was on the side of conservatism. We should have examined more than we did; we should have introduced the catheters up the ureters, when we would have obtained purulent urine from both sides, indicating that trouble was located higher up than just the lower urinary tract. We could not have touched the stone in this case with the catheter, but a sufficient clue to its presence would have been given for the use of the x-ray, by which it should have been disclosed.

A more fortunate case than the preceding one is the following one of stone in the kidney:

Case 10.—C. B. H—n; claim agent; American; married; aged thirty-four years.

The diagnosis of the case is chronic prostato-vesiculitis and right calculous pyelitis.

This patient consulted a number of physicians and underwent a number of different kinds of treatment before being referred to me, March 31, 1904, by my friend Dr. Lindenberger, of French Lick Springs. His symptoms began about one year previously, shown by irritation and frequency of urination, and bearing down pain in the region of the perineum and neck of the bladder. The symptoms were much more pronounced in the day time than at night.

He made a trip to French Lick Springs shortly after the beginning of the trouble, which seemed to give him complete relief, but his symptoms began again three months ago. Since that time he has noticed much sediment in the urine, and often it has appeared to contain blood. A physical examination disclosed some swelling and acute tenderness of the prostate and seminal vesicles, which therefore first received our attention.

Treatment by means of prostatic massage, the hot-water siphon and internal antiseptics, diminished the inflammation that existed in the prostate and seminal vesicles.

Nevertheless there was considerable clouding and always blood corpuscles in the urine, the persistence of which led us to advise ureter catheterism in order to get the testimony of the urine coming direct from the kidneys. Double ureter catheterism was carried out on April 25, 1904. The urine from the left kidney was clear and free from abnormal elements, excepting a few red blood cells. These evidently came from the contact of the catheter. The urine from the

right kidney showed a large amount of pus as well as blood corpuscles.

From the history of the case, it was suspected that the inflammation in the right kidney thus shown, was due to a possible calculus. Therefore, Dr. Brokaw was requested to take an x-ray photograph of the two kidneys. The result was a shadow shown in the right kidney, indicating calcareous formation in that organ. On June 22d, under chloroform anesthesia, administered by Dr. Crandall at the Baptist Sanitarium, the right kidney was opened through the lumbar region by an oblique incision. After some difficulty, adhesions surrounding the kidney were severed and the organ brought into view. It was incised on the convex surface. A finger pushed down into the pelvis at once detected an angular stone of irregular outline, about as large as a hazel nut. This was removed and cleaned. A facet on one side indicated the existence of an additional stone which was also removed, and which was considerably smaller than the original one. (Fig. 1, Nos. 33 and 35.) A rubber drainage tube was left in the kidney pelvis. The external wound was partly closed by silkworm gut sutures. The patient convalesced satisfactorily, and recovered from the effects of the operation without undue delay or difficulty. Later, it was found that there was some tendency to persistence of the inflammation in the right pelvis, but this was gradually overcome by repeated ureter catheterizations, and washing of the kidney pelvis with argyrol solution.

The patient has recovered his general health; he has gained 40 pounds in weight, and carries on his work with renewed energy and satisfaction.

Cases in which kidney stone is diagnosed and sought for by exploratory operation, yet not found on opening the kidney, are numerous, indeed. Jacobson, of Guy's Hospital, reported 25 such cases—in which the symptoms of renal stone were present, lumbar nephrotomy was done and no stone found, the urinary symptoms having then been attributed to uric acid crises and other affections. Henry Morris reports 28 similar cases, in eleven of which nothing was found to account for the symptoms that had been interpreted as indicative of calculus.

It must be observed, however, that these cases were reported before the present era of ureter-catheterization and x-ray work. I believe that with these measures at hand, no surgeon will again report such a large series of such cases.

Without going into an analysis of all the signs of stone in the upper urinary tract, it may be mentioned that there are certain ones on which reliance may be placed; these are pain, hematuria, and the evidence afforded by use of the ureter-catheter and the x-ray.

Hematuria.—Hematuria, either in macroscopical or microscopical quantities, is practically always present where stone is present at some point in the urinary tract. I do not remember to have ever seen an exception to this rule. I have seen cases in which the urine looked, to the naked eye, quite clear, and without closer investigation it might readily have been presumed that it contained no blood; but sedimentation and microscopical

search have always demonstrated red blood cells in definite numbers. While the finding of hematuria does not necessarily lead to the diagnosis of stone, it serves a very useful purpose as confirmatory evidence, indicating, for instance, that the trouble has to do with the urinary tract rather than the liver or appendix; the appropriate examination then being carried out, the differential diagnosis should be determined.

Pyuria.—I have been on the lookout for a number of years to learn whether it were possible for a stone to exist in the kidney or ureter without the production of pus in the urine; in other words, whether pyuria is not equally as constant a factor as hematuria. I have also seen cases of urinary stone in which the urine was described as "perfectly clear," but in addition to blood corpuscles, many pus corpuscles were contained therein. While I can conceive it possible for stone to exist at some point, the channel becoming blocked or plugged below that point and by preventing drainage, preventing the passage into the lower tract of the pus or blood corpuscles; still I believe this is more or less a theoretical proposition, occurring practically never. A stone in a ureter does not permanently and completely block the passage of urine past it; while the stone itself may not be able to pass down, the ureter dilates sufficiently in addition to allow the urine to get through. I show here a section of ureter containing such a stone, from a case of multiple lithiasis, in whom I observed during his life, with the aid of the cystoscope, the urine to issue in the normal interrupted jets from each ureter opening.

I have therefore concluded, in my own mind, that both pus and blood are practically constant factors in this condition; although various symptoms of calculus might be present in a given case, I should hesitate to diagnosticate calculus without them.

Pain.—While the third of the triumvirate of characteristic indications of stone in the upper urinary tract may not be as faithful in its attendance on such cases, it usually makes up for such shortcomings by the vigor and aggressiveness of its attacks when it is present. Stone lodged in the kidney tissue does not cause as severe pain as when it is lodged in the pelvis or ureter, where it has room to roll around, subject to the movements of the body.

Interrupted renal or ureteral *colic* usually indicates that the stone has entered the ureter, or is engaged in its entrance, trying to pass down that narrow channel to the outer world. Whether it is very minute or of more considerable dimensions, does not determine the amount of pain experienced; the muscular ureter contracts down on it spasmodically, irritating the nerve ends and also causing backward pressure of urine behind it, to a certain degree. If the stone is small enough to get by the norrow isthmuses of the ureter, or the ureter relaxes sufficiently to allow the crowding urine to push it along, possibly it may pass into the bladder—and the victim is fortunate. It is, however, well established that certain kidneys have been entirely destroyed from the prolonged retention of such small calculi, and in some instances without causing enough pain to attract attention to the kidney as the source of

trouble. Dr. Caldwell, in *Railway Surgeon* for July 14, 1896, relates the very interesting history of his own case in which, although he evidently carried the stone in one kidney for upwards of sixty years, the pain occasioned was very erratic and served to delude the many diagnosticians of both this and the old country who were consulted during this long period. In this case the pain was located in the sacro iliac region; and exercise or horseback riding did not seem to increase its severity, contrary to the usual rule. The calculus was finally removed, in 1895, by Dr. Murphy, of Chicago.

This case and these facts about these several symptoms and signs serve to point the moral that I think is most useful and impressive in the study of these conditions—namely, that it is not the symptoms and general history on which we may expect to place reliance for diagnosis, but the *physical examination*. If, instead of analyzing symptoms for sixty years, in Dr. Caldwell's case, while he was suffering the torments that he so forcibly describes, the ureters had been catheterized and the x-ray applied, it is probable that the operation that finally gave him relief would have been advanced a number of years.

The proper and most direct mode of investigating a case suspected of having stone in the upper urinary tract, it appears to me, is (*a*) to study the history given; (*b*) learn anything from palpation that may be discovered; (*c*) analyze the mixed urine taken from the bladder; (*d*) introduce the cystoscope and observe the interior of the bladder (especially the appearance of the two ureter openings); (*e*) catheterize the two ureters, with the double object of noting an obstruction at any point in the channels, and of draining and analyzing the two urines as they come direct from each kidney; (*f*) if pus or a considerable quantity of blood show in either urine, have an x-ray taken, embracing both kidneys, ureters and the bladder. It must be remembered that a catheter passed up the ureter to the kidney, causes the appearance, usually, of more or less blood cells in the urine of that side merely from its mechanical impact; but it is usually not difficult to estimate the bearing this has on the individual case—by comparing the quantity of blood seen before manipulation with that incident to it. On this account, as well as for other reasons, it is always highly desirable to investigate the urine for blood and pus before any instrumentation has been carried out.

If a calculus be impacted at some point in a ureter, the catheter will meet with obstruction at that point, and if, in addition, we find purulent and bloody urine coming from that side (and not from the other), the presumptive evidence of ureter stone is very strong. If the case be a female, and we are using the wide-open air cystoscope, we may employ the wax-tipped ureter-catheter, as advised by Dr. Kelly, and look for the scratch marks on the wax that are supposed to register the contact with the calculus. But, unfortunately, I believe the usefulness of this procedure is confined to the female sex and the short, open cystoscope, for when we try to pass the waxed catheter through the long channel of a male cystoscope, of whatever design, its

liability to be scratched or rubbed is so great as to make the test unreliable, to say the least.

The Segregator.—If properly and successfully used, the segregator is capable of draining the two urines independently from the two kidneys, and show pus or blood in one or other of the two urines; but it is not capable of giving the contact or obstructive indications of the stone that the ureter-catheter is. It is quite as liable to develop blood corpuscles in the urine from its mechanical contact, and I confess I have never been able to satisfy myself that complete segregation was attained, with no possibility of mixing the two sides. But when you have a ureter-catheter passed to the kidney pelvis of one side, and another to the pelvis of the other side, you *know* there is no chance of contamination between the two, even should the patient cough or strain to urinate, etc. As to a comparison between the painfulness of the two procedures, the choice is much in favor of the catheterization. As soon as the catheters are inserted the cystoscope is withdrawn, leaving the catheters to drain for a half hour or so, while in order to drain an equal quantity of urine with the segregator the whole metal instrument must be left in during that time, causing much complaint on the part of the patient.

I have asked my friend, Dr. R. D. Carman, who has had large experience in such work, to give me his estimate as to the present status of the Roentgen-ray examination for diagnosis; he deems the advantages of the method to be as follows:

1. The examination is painless, no general or local anesthesia being necessary, with resultant depression, etc. 2. No danger from traumatism or infection; the danger from burn is practically nil. 3. It gives the exact location of the stone, and, especially important, the number of stones present. 4. There is no exploratory operation necessary for diagnosis. 5. The negative diagnosis is as accurate as the positive, except in very stout patients. 6. It differentiates calculous nephritis from other conditions in neighboring organs.

The percentage of error in all cases skiagraphed, of the great number of operators, has been less than 3 per cent.; and in the majority of instances where there were erroneous negative diagnoses, the calculi were so small that they passed without surgical interference.

DISCUSSION.

Dr. E. G. Mark, of Kansas City: Dr. Lewis' paper covers such a large field, and covers it so thoroughly, that it is difficult to add anything of interest to what has already been said. In the use of the cystoscope, I agree with him most thoroughly. It has been my rule in all bladder cases, where there is the slightest obscurity in diagnosis, to cystoscope; and it is a rule to which I believe there can be no exceptions. Certainly, in bladder stone, cystoscopy is an essential for these reasons:

(1) To decide the presence of stone; a question which may be decided positively by other means, but which can never be decided negatively otherwise.

(2) To ascertain the number of stones present.

(3) To learn the character, size and location of such stones, and

whether they are encysted or free in the bladder cavity.

(4) To ascertain the existence of concomitant conditions, such as tumor, diverticula, obstructive hypertrophy of the prostate and contracture of the bladder neck.

I consider all the foregoing essential to an intelligent diagnosis of bladder stone.

The necessity for such diagnosis is well illustrated by a case reported by Guiteras, at the last meeting of the American Urological Association, in which he attempted a Bottini operation without previous cystoscopy, and failed by reason of an encysted calculus back of the prostate.

The cystoscopic examination should determine the line of treatment to be followed, and Dr. Lewis has covered this field too well to call for further discussion.

In pelvic stone I consider constant microscopic hematuria, the significance of which is so insisted upon by Ransohoff, to be of great diagnostic value, especially when considered in conjunction with Bierhoff's test The telephonic principle, lately applied to ureter-catheterism for the purpose of detecting kidney and ureteral stones, would seem, in my judgment, to be a most excellent procedure, and one upon which much reliance may be placed.

The shortcomings of the x-ray and the wax-tipped catheter of Kelly, have been well pointed out by Dr. Lewis, and require no further mention.

Dr. Lewis' operative cystoscope must command the admiration of all of us, and certainly opens up a wide field for speculation. In the same connection, the dilatation of the ureter with sterile oil, to facilitate the passage of a ureteral calculus, suggested and applied successfully by Dr. Louis Schmidt, of Chicago, is of interest.

As has been pointed out, neglected kidney stone is capable of the greatest damage, and, the diagnosis once made, no time should be lost in temporizing. Attempts to dissolve the stone are worse than useless, and operative procedures should be immediately undertaken.

There is one class of urinary stone upon which the essayist did not have the time to touch, and it is one upon which I should like to have heard him express himself—*i. e.*, prostatic stone. Lately I exhibited, before the Kansas City Academy of Medicine, one hundred twenty one stones, which I had removed from the prostate of one case. The diagnosis of these cases is by no means hard in the hands of a careful diagnostician. The difficulty lies in the misleading symptoms, and in no inconsiderable proportion of these cases the diagnosis depends upon a careful posterior urethroscopy.

Dr. H. J. Scherck of St. Louis: I cannot let this opportunity pass without adding a word of appreciation for the work accomplished along the lines indicated by the reader of this paper.

It has been my good fortune to have seen the practical accomplishment of this refinement in the diagnosis of bladder troubles. In the conduct of a large genito-urinary clinic I have recently seen several cases in which the exact conditions could not have been diagnosed except by two means: First, an exploratory operation or the proper use of the cystoscope. In

these cases a stone was situated posterior and underneath the prostate. An operation was done, of drainage of the bladder and the stones were accidentally discovered.

There is, however, no gainsaying that in the hands of the average man the cystoscope is not as serviceable as it is with Dr. Lewis or those equally expert.

With regard to ureteral catheterization, I would urge a few words of caution. In the first place, it unquestionably requires an expert to get the full benefit of this procedure; secondly, I have no doubt that it is often attempted and done in cases where the proper indications are wanting; in the third place infection can take place as a result of this method. In cases of gonorrhœa an infected catheter is often introduced into an aseptic ureter, because we know that we frequently have cases of violent cystitis with positively no urethritis. The newer method mentioned here to-day, which consists of the telephone arrangement in order to hear the metallic click, appeals to me as a decided advance, and as a result of which more precision may be expected. I think it has a decided advantage over the wax catheter.

In conclusion, I wish to express my deep interest in all that Dr. Lewis has said, for I realize that the stimulus of his initiative has done much toward the advancement of this line of work.

Dr. Lewis, in closing: I did not go into details of symptoms and tried to give just the most valuable requirements to make a diagnosis. A barrel of symptoms are not worth ten cents compared with fifteen minutes of personal examination by the doctor. In that examination what is it that will lead to a correct diagnosis; is it the stone searcher? No, sir. Suppose you have a stone in the bladder; which is worse, to leave that stone there for ten years or to put the cystoscope in and then get it out? Manifestly the thing to do is to make a diagnosis of the stone and then get it out. If there is a stricture of course you want to remove it, but just because you have a stricture is no reason why you should not make your diagnosis of stone if there is one present. I do not agree that strictures are in the majority of these cases. In all these I have reported, there was no single instance of stricture, but if you have a stricture and fail to remove it, you will fail to get a good result. As to the suprapubic route versus the perineal route, in certain cases you could not cure a man in ten years by doing simply a suprapubic removal of stone in the bladder, for in many of these cases where stone is present, there is a contraction at the neck of the bladder. If you leave that contraction you will get a suprapubic fistula for an indefinite length of time. In one such case I had to go into the bladder and correct it because at first I had not recognized it.

HYPERTROPHY OF THE HEART WITHOUT DISEASE OF THE VALVES.*

By J. R. Lemen, M. D., St. Louis.

When gathering prominent facts in regard to disease of the circulatory system it is astonishing how irrelevant the symptoms are to the actual disease present in many cases. When a patient suffers from palpitation it is at least inconvenient, and will probably scare him, but this does not mean that he has disease of the heart.

If we can detect a murmur during the heart's cycle this shows that the machinery is not running clear, as an engineer would express it, but it does not mean that the heart should be treated, for the compensatory hypertrophy may be perfect, and this is nature's way of dealing with imperfect valves, therefore the effort of the physician should be in the direction of sustaining the growth but not of increasing it by the use of drugs beyond the necessary requirement in the individual case.

However, in many patients that present themselves to the physician the symptoms are such that they do not even suspect that the heart is at fault, and will locate their troubles in other organs, when indeed they have the most pronounced weakening of the myocardium.

Upon examination of the heart in these patients, we do not find a murmur during the heart cycle, but we possibly find irregularity in the beat, or they may have tremor cordis or delirium cordis. The patient will complain of dizziness upon moving rapidly, he will have shortness of breath upon exertion; and in outlining the heart, by percussion, we find the actual dullness of the heart area considerably increased, showing hypertrophy.

When we find these signs and symptoms, it is not due to the intrinsically diseased heart, but because of the fact that the heart is not able to overcome the ever increasing blood pressure in the systemic or pulmonary circulation.

The probability is that the heart has been gradually growing in muscular power for years in its attempt to take care of an increased blood tension that has not been noticed by physican or patient.

We know that a large part of the heart power is used to dilate the vessels, and if there is for any reason a continuous contraction of the vessels in the general circulation, the heart follows the well known law whereby all hollow muscles hypertrophy and increase in strength in proportion to any obstacle offered to the exercise of their function, provided their metabolism remains perfect.

In this we have the key to the condition, for so long as the metabolism is perfect the heart will continue to grow, so as to care for the increased weight in the blood vessels; but when the pressure is high continuously—say that the Riva Rocci sphygmomanometer indicates a pressure inside the arteries of 180 m.m.—it is

*Read at the annual meeting of the Missouri State Medical Association, Excelsior Springs, May, 1905.

very plain that the metabolism of the heart will eventually be interfered with, as well as the nutrition of other parts of the body; and as a consequence, we have the myocardium unable to take care of circulation properly, and we have resulting dilatation and possibly sudden death from heart failure.

The direct cause of the hypertrophy in these cases is the extra work of the heart to overcome increased pressure, and it is astonishing how frequently the Riva Rocci will show very greatly increased pressure in people that are apparently otherwise in good physical condition.

We must remember that the vessels are not only elastic, but are also endowed with "nervous governance." We must also consider that nature, when in harmony, is very economical; that one function is expected to rest while some other is working. Thus the man who is digesting a heavy meal is not expected to give us his best thoughts during that time, since the elastic vessels, by contracting and dilating, will supply increase blood to one part and diminish it in another. When the equilibrium is maintained we do not find the general blood pressure greatly increased in health by the activity of the various functions; but disturb the equilibrium by great functional activity in the stomach and muscles at the same time, and the blood pressure will be tremendously increased with consequent extra strain on the vessels, the heart getting its full quota. We have seen in just such conditions the Riva Rocci record a pressure of 200 m. m. to the square inch; if the metabolism of the myocardium is good the heart will lift this load without permanent injury; but if the coronary arteries are not supplying proper nutrition, we are likely to have trouble and probably disaster.

Thus we see that the direct cause of hypertrophy of the heart, when it occurs without disease of the valves, is due to the increase in the blood pressure in the circulatory system.

We believe that this is the cause of many indefinite and puzzling symptoms that cannot be explained on any other hypothesis; but when we attempt to find the *cause* of this increase in the blood pressure we have to admit that with our present knowledge of vito-chemistry it is sometimes unexplainable; however, in other cases we are more fortunate, and can find the cause and correct the evil.

The "nervous governance" is affected through the vasomotor system when the equilibrium is not maintained and the vaso contractors increase the tension, which is not relieved by the corresponding promptness of the dilators to do their work, and, as a result, we have this arterial tension constantly present and the heart growing to overcome the pressure in these contracted arteries.

We have now a patient suffering in this way. A gentleman, fifty-two years of age, married, good personal habits, an intense worker, closely confined, with a great deal of literary work, a man that seldom allows himself to relax. His blood pressure, when we first examined him, was 220 m. m. He could not sleep, complained of great restlessness, nervousness, and was generally out of condition. When the pressure was reduced to something near normal, say 160

m. m., all of these symptoms disappeared, and he could sleep like a baby, as he said. This was done by the use of nitroglycerine, sodium iodide, and moderate exercise in the open air.

Again, we see the same condition of increased blood pressure from indiscreet indulgences at the table or in the use of alcohol.

We have under treatment another gentleman fifty years of age, married, a farmer, in comfortable circumstances, robust appearing, weighing 230 pounds, a big eater and a moderate drinker of beer. He complains of distress in the region of the heart; the heart is quite irregular, and at times seems to labor greatly, so that it causes him to feel exceedingly uncomfortable; he finds himself unable to maintain marital relations, and is exceedingly depressed because of his condition.

The pressure shown on first examination was 215 m.m.; the heart was considerably hypertrophied, the apex beat being on the mammary line, one-half inch lower than normal.

The cause of the high pressure was believed to be the disturbance of digestion resulting in lithemia and uric acid. He was given hydrochloric acid and potassium iodide, and under this treatment the pressure was reduced to 205 m.m. in one week. In another week, under the same treatment, the record was 185 m.m., with decided improvement in all symptoms.

He is still under treatment, with indications that there will be still greater benefit.

In a number of other cases we have been very much gratified with the improved condition of patients when the blood pressure was reduced to something near normal.

Of course in the class of cases where hardening of the arteries has taken place and the elasticity is gone, the problem is much more serious, and these cases are frequently benefited but little by any treatment.

To sum up: First, be careful to investigate the blood pressure in all patients that have passed forty years of age. Second, we believe that many cases of neurasthenia and allied troubles can be relieved by correcting and reducing the high blood pressure, thus relieving the strain on the heart. Third, we would recommend the words of Prof. T. Clifford Allbutt, "that you advise your patients to have their blood pressure tested every two or three years, so that any disposition to excessive pressure may be averted and the integrity of the arterial tree preserved."

Discussion.

Dr. T. F. Lockwood, Butler:—The heart and its ailments is a subject that should be more thoroughly discussed than it is to-day. It is the first organ to reach maturity, it is the first to be installed in office and it is the last to cease its action. Animation may vanish and the soul itself take its flight before the heart will yield to the inevitable. It is an organ that has been neglected from the fact that we have laid aside its study for something less intricate by which we may establish a reputation. The progress in surgery has brought about such conditions that we realize we must stain our hands with blood before we can become famous, and surgery has directed us away from the com-

mon field of medicine. Hypertrophy of the heart is not a pathologic condition; I believe it to be a physiologic one, a condition that nature has brought about to overcome some obstacle; there has been perhaps some congenital defect, there may be an arteriosclerosis. These are the most common causes of cardiac hypertrophy, the greater work placed upon the heart having caused an increase in the muscular structure, just as we find a development in the muscles of the blacksmith's arm from constant use, just as we find a physiological enlargement in the heart's structure. There is no specific cure for hypertrophy, and a favor of its continuance is to be sought rather than retarded in order to maintain proper compensation.

Dr. I. J. Wolf, Kansas City:—I have but one criticism to offer, *i. e.*, the paper should have been entitled "The bad results of increased blood pressure upon the heart and upon the system." There was a time when no one thought of disease of the heart-muscle, but the time has come when we pay more attention to the muscle than to the valves. The heart, of course, is divided into two sides, the left side becomes hypertrophied from arteriosclerosis, contracted kidney and from increased imbibition of fluids, as beer, etc. When I was a student at Munich, where some people drink as many as thirty quarts of beer a day, there was a heart hypertrophy known to pathologists in that city caused by the immense drinking of beer to which they gave the name "Munich disease." Hypertrophy of the right heart, on the other hand, may be due to bronchitis, asthma, etc., but hypertrophy of either side is always caused by some obstruction in the periphery. Whenever the heart is called upon for any length of time to do more work than ordinarily, it becomes hypertrophied, and this is a benign hypertrophy; but when the contractions of the heart are no longer strong enough to overcome the obstruction then, in addition to the hypertrophy, we get dilatation as well, and it is then that we get symptoms of lack of compensation. The same is true in disease of the stomach. We have now learned that the motor function of the stomach is the important one and as soon as the motor function is disturbed the patient suffers. So it is with the heart. Even in severe valvular trouble the patient will feel comparatively well until there is lack of compensation.

Dr. J. W. Dean, Maryville:—I want to make a little criticism of the treatment. My understanding and knowledge of nitroglycerine is that it increases the pressure instead of diminishing it. The question in my mind is how the essayist would diminish the pressure by giving nitroglycerine.

SPECIMENS OF PELVIC SURGERY WITH CRITICAL REMARKS.*

By A. H. Meisenbach, M. D., of St. Louis.

I.—Carcinoma of Cervix Uteri.

This is not a rarity, but it illustrates the diagnosis, prognosis and operative technique. The patient was thirty-five years of age and had four children. I first saw her on the first of April. She had been seen previously by a physician who had diagnosed carcinoma of the cervix, and advised operation. She had gone to him for persistent hemorrhage. I corroborated what the physician had said. I found the cervix involved with the mouth gaping. The uterus was freely movable. The woman was of spare build and the diagnosis by bi-manual examination could be easily made. I chose the abdominal route and found it a comparatively easy operation, but I also found that the pelvic glands were much involved on the right side. They were involved to such an extent that I hardly felt justified in attacking them and attempting to get them all out. The vaginal route does not give a man a fair chance in such cases. I doubt if the involvement of the pelvic glands can be determined and outlined so that the prognosis can be fairly determined. I have once or twice used the vaginal route for removal of the uterus, but it has never been satisfactory. The vaginal route has been developed by the Belgian and French schools, and for a time it seemed to be *the* operation, but I suppose men came to look at it as I have, namely, that it was, on the whole, unsatisfactory. The abdominal route has an element of added danger, but at the same time there is some satisfaction in knowing you have the field clearly before you. Practically you are working in an open field and not in the dark, as in the vaginal route. I invariably use that abdominal route and have never had to regret it. Of course we can't deny the element of danger due to shock, etc., yet when we have vaginal drainage this is minimized and in such cases drainage is one of the prime factors so far as the handling of the case is concerned. Even in removing fibroids of small size the abdominal route is superior. I once removed a tumor the size of an orange through the vaginal route and had the misfortune to lacerate the rectum and infection occurred which might not have resulted had I chosen the other route. Under some circumstances it may be very difficult, so that in all important operations I have discarded the vaginal route. The only exception I would make would be in inflammatory conditions where I am dealing with pelvic abscess or pus tubes, where a temporizing operation has to be done, but also in these cases radical operation can only be done satisfactorily by the abdominal route.

II.—Fibroids of Cervix and Corpus Uteri; Cystic Ovaries; Uterus Gravidarum.

This patient was forty-two years of age and had been a bachelor girl up to November of last year. She was a

*Presented at the meeting of the St. Louis Medical Society, June 10, 1905.

woman of fine physique, raised in the country. She had never given any history of decided ailment until about March, when she began to flow irregularly and excessively and within the last month began to have pain, especially in the left side. Her family doctor made a diagnosis of fibroid and sent her to me. On bi-manual examination the os had the feel of the infantile type. It presented no evidence of pregnancy. The protruding portion could be noticed, and with one hand on the abdomen it gave the impression that this was one mass. It was movable and not bound down. I made a diagnosis of multiple fibroid, but the diagnosis of pregnancy was not made, nor could it be made at this stage. I saw her first in May, and on June the first performed pan-hysterectomy. The right ovary was about the size of a fist. The uterus was fairly movable. In trying to free the right ovary it broke down and from it escaped a grumous mass, looking like a chocolate mixture. In this I found dark crystals of hematin. There had been a hemorrhage into the ovary. On the left side I found a similar condition in a minor degree, so I removed both ovaries. I felt I would prefer to induce the menopause than to take any chances of a recurrence of disease in the ovary that could be laid at the door of the surgeon later. At the base of this mass were adhesions and inflammatory conditions, though the woman gave no history of any febrile reaction, but there was quite a peritoneal involvement. The bladder, too, was much more closely bound down than we usually find it, and for the first forty-eight hours the patient passed bloody urine. The salient feature in these operations always is to guard against injury to the ureter, and, next, the bowel. Fortunately the ureters were not involved. You will find here a beautiful example of the pregnant condition of six weeks' or two months' gestation. Aside from the passage of bloody urine the patient is in good condition.

III.—Carcinoma of the Rectum.

The patient was sixty-five years old. I first saw him on the 6th of May, 1904. The previous fall he had been examined by a good surgeon of St. Louis on account of his rectal trouble. A small piece was excised and examined by one of our best microscopists in St. Louis, and a negative result reported. The gentleman "lay on his oars" and was only tentatively treated. On the 6th of May, when I saw him, the mass could be clearly outlined about one and a half inches from the external skin margin and passing in the direction of the prostatic part of the bladder. When the question of operation was placed before him and he was told that it was a case that would mean much suffering, or, if operation were chosen possibly death shortly thereafter, he chose the latter. On the 19th of May I did an operation for excision of the rectum. I made an incision around the anal margin and then simply drew the rectum down, twisting the coccyx out of place but did not resect it. I think this exemplified the fact that the Kraske operation is often an unnecessary operation in carcinoma of the rectum. I found no difficulty in bringing the rectum well down and resected about five inches of it. I

also resected both lobes of the prostate. This left a large wound which was slow in healing. The patient was in the hospital about three months. In the third week of November he went to the World's Fair in an open buggy. He was still weak from the operation, and the weather at that time being quite chilly he was siezed with an attack of grip resulting in pneumonia, followed by a lethal ending in December. At the post-mortem I found that there had been no recurrence at the site of operation, but in the liver there were a few nodules, and on the surface you will see quite a little nodule which is carcinomatous, but the liver tissue is not involved at all macroscopically. The fact that a recurrence took place at this time would not have been responsible for his death, for he could have lived on a long time. It also shows a beautiful case of solitary gall-stone in the gall bladder. He always had an idea that he had cirrhosis of the liver, which was not the case; the liver irritation was due to the solitary stone, which floated about and may have produced symptoms of irritation. This case illustrates that in carcinoma of the rectum, when these cases are taken early the chances of protracting life are very favorable, provided a radical operation can be performed. The Kraske operation is a very severe one. I have only done it once. That patient was a woman with a carcinoma of the sigmoid. Occlusion had taken place and the bowels were like a drum. I did a colostomy and the result that followed was remarkable. From a pale, cadaverous woman she became fat and plump. Finally I did a Kraske operation to which she succumbed, and I have often thought that had I let her alone she might have gone on fairly comfortable for quite a while. This rectum was shriveled considerably. I made a clear incision, removing all the contents of the lower pelvic floor along with the muscular floor and the fat. I did not make an incision through the gluteus muscle and form an artificial sphincter, as has been suggested. This specimen removed at the post mortem shows no involvement. Though I did not take this out myself, it was taken out sufficiently well to show that there is no return; for carcinoma and sarcoma are conditions that most always show macroscopically.

Discussion.

Dr. George Gellhorn said that in this connection it might be of interest to give a history of the operation for cancer of the uterus. The first vaginal hysterectomy for uterine cancer was done by Langenbeck in 1813, and afterwards by Sauter in 1822 and Recamier in 1829. Then there was a long interim when no hysterectomies were performed. After the introduction of antisepsis vaginal extirpation for uterine cancer was taken up by Czerny in 1879. The first abdominal hysterectomy was performed in 1878 by W. A. Freund, of Breslau, Germany. This patient is still living and was demonstrated before the Society of German Physicians and Scientists in 1904. But the following operations by Freund and those who adopted the method were accompanied by such an appalling mortality that the operation was abandoned for many years. In 1895 Ries, of Strassburg, now of Chicago, suggested to include in the ab-

dominal operation the widest possible extirpation of the parametria and the larger portion of the vagina and to clear out of the pelvic cavity all of the pelvic glands, whether enlarged or not. The following year Clark, of Johns Hopkins, devised a similar operation. In 1900 Wertheim, of Vienna, revived the operation of Ries and created a new movement in the operation for uterine cancer. A large number of modifications and extensions of the Wertheim method were all based on the original suggestion of Ries. The salient point of these abdominal radical operations was the complete extirpation of the parametria, the pelvic glands and the pelvic connective tissue. This procedure was based on the assumption that in uterine cancer the lymph glands of the pelvic cavity soon become infected; and unless these glands were removed, all efforts to prevent recurrences would be futile. But there are strong objections to such a radical procedure. First, the statement that the lymph glands are nearly always involved and in an early stage of the uterine affection were disputed. The speaker had had the opportunity of compiling the literature on the subject for a paper read before the American Gynecological Society, and he had found, from the literature at his disposal, that the frequency of glandular involvement in uterine cancer had been greatly overestimated. It seemed that, irrespective of the seat of the cancer in the uterus, the pelvic glands were involved in 27.7 per cent. of the cases, and even in the most dangerous form, viz., cancer of the cervix uteri, it did not exceed 28 per cent. plus. In other words, in only about one-third of the cases of cancer of the uterus were the pelvic lymph glands involved. In the remaining two-thirds the lymph glands were normal. It followed that if the suggestions of Ries were carried out, and the lymph glands extirpated in all cases of cancer, that two-thirds of the cases would be thus subjected to an unnecessary operation. Unfortunately one cannot tell before or during operation whether or not a gland is involved; in other words, should be removed. A mere enlargement was not indicative of involvement. It might be due to a hyperplastic or hypertrophic condition. The studies of Schauta, of Vienna, were conclusive in this direction. On the other hand, in quite small glands cancer had been found on microscopic examination. It required sometimes hundreds of sections before the cancer could be demonstrated. It was evident, then, that it would be necessary to extirpate all glands irrespective of size and appearance, and as the lymph glands were diseased in only one-third of the cases, in the other two-thirds excision would be unnecessary. Of course cancer is such a terrible disease that we would be justified in rather doing a little too much provided it could be proved that removal of the glands did not materially increase the danger to the patient. The mortality from the radical abdominal operation with the extirpation of glands was 21.5 per cent., compared with a 7 to 9 per cent. from the ordinary simple vaginal extirpation, or compared with 9, 10 or 11 per cent. from the simple abdominal operation without the removal of pelvic glands or pelvic tis-

sue. The morbidity was also very considerable. Out of thirty-three cases of von Rosthorn but fourteen had an undisturbed convalescence. The possible injuries to the ureters, the bladder, the rectum and intestines, the increased danger from infection due to the prolonged operation and the unavoidable handling of the intestines during the operation, and the possibility of ileus, especially in operations of long duration and in weakened individuals, all speak strongly against this radical procedure. Moreover, even with the extensive operation as advised by Mackenrodt, Sampson, Strauch and others, it had been proved to be absolutely impossible to extirpate all the pelvic lymph glands. This was based on anatomical grounds. First, they were not always in the same places. There were glands where one did not expect to look for them, and, in addition, there were technical difficulties that prohibited the removal of these glands—*e. g.*, there was one gland beneath the hypogastric artery which could not be removed in the living on account of its location; then there were those glands above the bifurcation of the aorta, the lower, median and upper lumbar glands, and those hidden beneath the mesentery, and these upper glands were affected in a great percentage of the cases in which the lower glands were unaffected, so that the removal of the lower glands would still leave the operation incomplete. Wertheim, in 1904, reported to the Gynecological Society of Vienna that all of his cases in which carcinomatous glands had been removed had become recurrent. Clark, another authority, admitted two years ago that he had ceased to think that the removal of affected glands formed an intrinsic part of the operation. Sampson, who himself had devised a very radical method, in the May number of the *Albany Medical Annals* said that he now realized that the ultimate results of cancer operation with the removal of the lymphatics gave no better results than those without the removal of the glands. Briefly, then, Dr. Gellhorn believed that the removal of the lymph glands in operations for cancer of the cervix was unnecessary, dangerous, incomplete and inefficient, and that the systematic search for the pelvic lymph glands should be abandoned. This had been his contention at the recent meeting at Niagara Falls, and he was surprised to find that not a single speaker at that meeting had put himself on record as enthusiastic in favor of that method. It was generally admitted, on the other hand, that cancer of the cervix extended very early into the parametrium. In 52 to 70 per cent. of the cases the parametrium was involved. This should induce one to remove this particular tissue together with the uterus. Unless that tissue was removed where the disease was most probable to recur, perfect results could not be hoped for from operative interference. The simple vaginal and the simple abdominal operations were not justified in cancer of the cervix, for neither of these removed anything but the uterus. Not a particle of the parametrium was left in continuity with the uterus, and it was just this tissue for at least an inch on either side, that was the focus of recurrence in four-fifths of the cases within the

first year. The operator should, therefore, not only extirpate the uterus and appendages and part of the vagina, but also the pelvic connective tissue. This could be done either from above or from below. If the vaginal method be preferred, not the ordinary method should be employed, but the so-called paravaginal method. A very deep incision was made, splitting the vaginal tube its entire length, cutting through the paravaginal tissue and through the levator ani, and, without touching the sphincter, curve around the anus to the median line. This did away with a deep vagina. There was only a shallow excavation left, about an inch or an inch and a quarter in depth, and the uterus and the base of the broad ligaments were within easy reach and absolutely open to sight. There was no working in the dark, and there should be no working in the dark in any vaginal operation. Where these vaginal operations were indicated, they could be done under the eye and finger. The vaginal method was not associated with those dangers encountered in the abdominal operations. While the mortality following the radical abdominal operation with extirpation of the glands was 21.5 per cent. plus, following this vaginal method it was only 12.4 per cent. One could extend the limits of the operation as far with the paravaginal as with the abdominal operation, and it was of very little importance to know whether the pelvic glands were involved. If they were, the case would die anyway; it was bound to have a recurrence. Whether one did the abdominal operation with extirpation of pelvic tissue, or the paravaginal operation, was largely dependant upon the individual operator. The vaginal method may be more difficult to some operators, but if it were proved that that was the better method, then it was the duty of the operator to acquire that method, whether it was the more difficult or not.

Dr. A. R. Kieffer said he had occasion to tell the society several times that his views were the same as Dr. Gellhorn's. He had heard Baldy challenge the whole American Medical Association to have one man state he had done an operation for cancer of the cervix after clinical manifestations of the disease had appeared, and that the patient was absolutely well after five years, and not a man had answered the challenge. They did report about five such recoveries where the body of the uterus was involved. It seemed there was some truth in Baldy's statement that the operation for cancer of the cervix was surgery's disgrace. The speaker's opinion was that it postponed the fatal issue usually, but seldom cured the patient. The point made by Dr. Gellhorn that these lumbar glands were often involved when the pelvic glands showed no involvement, had been made by Carstens. He had operated some fourteen months ago upon a case, a very fair case, for a vaginal operation. As the patient was about to die on the table, he had simply done a high amputation of the cervix. In less than two weeks there was a return at the site of the wound. With that he had placed her under x-ray treatment and at present the woman was in pretty good health, but he did not think she would live five years. He believed, however, that the

operation and the x-ray together had done some good. For the removal of the pelvic tissue the operation suggested by Dr. Gellhorn was about as good as any.

Dr. John Young Brown believed the greatest drawback a surgeon had to contend with in dealing with malignancy of uterus and rectum was the fact that these cases seldom reached him until they had practically passed the operable stage. Carcinoma of the rectum, as a rule, was treated for months for "piles" before a diagnosis of malignancy was made. The same applied to malignancy of the uterus, this condition being given the usual preliminary treatment for "change of life." The importance of careful examination of all rectal and uterine conditions was now being strongly emphasized, and he believed this campaign of education would result most beneficially to surgeons.

In the surgery of malignancy of the rectum, it had been the practice of the speaker to deal with this condition by the combined operation: namely, the simultaneous assault from within the abdomen and below. The speaker expressed great interest in the statistics presented by Dr. Gelhorn. While serving as an assistant to Dr. Joseph Price, of Philadelphia, he heard him make the statement that ten cases of carcinoma of the uterus could be curetted and cauterized and ten hysterectomies performed, and that the ten upon which the minor procedure was done would live as long as those on whom the major operation had been performed. Dr. Gellhorn's statistics seemed to bear out this assertion. In dealing with malignancy of the uterus, the speaker very strongly favored the abdominal route. He believed there was no condition involving the pelvis that could not be more satisfactorily handled from above than through the vagina. The arguments that have been used by the advocates of the vaginal route that this procedure was followed by less shock than was the abdominal operation, he did not think were well taken. He had seldom seen patients suffer to any great extent from shock following surgical dealing with pelvic conditions through the abdomen. Shock, in his opinion, was largely due to prolonged anæsthesia and slow and slovenly surgery. He had found that in fully 30 per cent. of patients operated on for pelvic disease, the appendix was involved. He believed, however, that excellent results were gotten both through the vagina and abdomen. Dr. Gellhorn had had exceptional opportunities for work by the latter method, and his skill enabled him to accomplish very much more by this route than could be accomplished by one whose training had been entirely along other lines.

Dr. Norvelle Wallace Sharpe raised the question as to whether the St. Louis Medical Society was ready to have it go on record that it believed operative work in cervical cancer of no avail. That, it seemed to him, was distinctly pernicious. First, it was not proven, and, second, it was highly discouraging to make such a prognosis to a patient. On the other hand, if the surgeon believed it to be a fact then he was in honor bound to follow the policy of Dr. Funkhouser and say to his patient, "If I operate on you, you must expect a recurrence." Nor, even, if recurrence was

the rule, should this prevent us from operating, nor should we in the slightest degree add discouragement to the patient who is already carrying a grevious burden. The challenge put up by Dr. Baldy several years ago could hardly be entered into; it was but a surgical bluff that had no scientific weight. Regarding the statistics so ably presented by Dr. Gellhorn, it was worth while remarking that his final statistics were for abdominal radical operation as opposed to the paravaginal, 24 per cent. to 12 per cent. That was unfair, for in the whole line of argument the abdominal radical operation had been excluded. He agreed with Dr. Brown in that he had not seen any cases of extraordinary shock, nor had he seen any bad results from the abdominal procedure, viewed solely as an abdominal procedure. He believed that, as yet, he could do better work with greater ease through the abdomen than through the vagina. In his judgment the extirpation of the parametrium per vaginam was distinctly more difficult and required a far greater degree of skill in the assistants; and it must, therefore, be remembered that they were considering an operation distinctly more difficult to carry out when operating through the vagina than by abdominal section.

Dr. N. J. Hawley agreed that the choice of route depended upon the way the man was accustomed to work. Leaving out the question of cancer and speaking of inflammatory troubles and growths of the uterus and ovaries other than cancer, the majority of cases could be relieved by the vaginal route, and only those cases where some trouble of the appendix was suspected, or where there were dense adhesions, should be operated on through the abdomen. In many cases the abdominal route could be used after starting the operation through the vagina.

Dr. William H. Stauffer considered the case of carcinoma of the rectum a beautiful illustration of the necessity for early diagnosis of diseases of the rectum. Unfortunately physicians treated many of those cases without making any examination at all. The class of men who did that would not think of treating the throat or any other part of the anatomy without a thorough examination, but they would treat the rectum for years without doing so. He had recently seen a case treated by a neurologist for three years and there had never been an examination. The patient died of cancer of the rectum. Dr. Meisenbach was to be congratulated on the results obtained. It was unfortunate that the patient died of an intercurrent disease.

Dr. Kieffer said that one of the objects of operation was to postpone death, but he still insisted that many of the cases that appeared in reports as cured, did not remain well.

Dr. Gellhorn said he was not as pessimistic as some of the other gentlemen. If a man were pessimistic there would be no inducment for him to operate at all. He had not prepared himself for this discussion and he had not the statistics at hand to answer exactly the questions asked. It was only those statistics he had prepared for the American Gynecological Society that were fresh in his momory, but there were a number of cases on record of patients having

lived free from the recurrence for more than three years; for instance, there was this first patient already referred to who was operated on in 1878, and there also were a few others in which even after a simple high amputation of the vaginal portion the disease had not recurred. He was fully aware that the word statistics had a doubtful tone in the ears of many, but he was only referring to those cases where the diagnosis had been made by the microscope, and he had only referred to men whose veracity was beyond question and whose authoritative position was recognized everywhere. The radical abdominal method was not yet five years old, therefore reliable statistics covering this period of time were not at hand. The paravaginal method, which he had wished to advocate was twelve years old. Of twenty-five surviving cases forty per cent were free from recurrence five years or longer after operation. Of thirty-nine surviving cases of Mackenrodt, fifty per cent were free from recurrence three and a half to six years after operation. As far as the permanent freedom from recurrence was concerned the literature on the subject had been reviewed by Winter in 1902. He gave the permanent results of the simple abdominal and the extended abdominal, the simple vaginal and the paravaginal hysterrectomies, in fact all of the different methods in use, and it could be easily ascertained what the results of the respective methods were.

Dr. Meisenbach, in closing, said he did not anticipate that the presentation of these specimens would raise so much surgical dust. John McDowell's old saying, that seeing is believing, but feeling is the naked truth, should be reversed in this case. In spite of all that had been said in opposition to the abdominal route, he believed that in the majority of cases the abdominal route was still the route of selection for the average man. Morris, in appendiceal operations, liked an incision an inch and a half long and the patient eight days in bed, and that was all very well in an ideal case seen within the first forty-eight hours, but it was not the method suited to the average case. The speaker was glad Dr. Brown had stated that there need not be extensive surgical shock in opening the abdomen. It was unnecessary to expose the intestines in the manner that was sometimes done. If the bowels had been thoroughly cleaned out and the anesthetist kept the patient under complete anesthesia there need be very little handling of the bowels provided the adhesions be not extensive. Of course, where that was the case, the bowels must be handled more or less, otherwise they could not be carefully kept out of the way if thorough packing was done. No one who had studied the anatomy of the pelvis, of the lumbar region and of the mesenteric glands, would believe for a moment that the tearing out of the pelvic glands could be compared with the operation on the breast, for there was an entirely different relation, therefore the statistics of cure of cancer of the breast were superior and for an anatomical reason. Dr. Moore had asked the difference in longevity between those patients operated upon and those not operated upon. In all these cases of carcinoma of the cervix

there was the important factor of hemorrhage. It was the irregular and profuse hemorrhage that pulled the patient down most rapidly. It was in this condition that perhaps the medical man was negligent because he did not interpret it rightly. Many of the cases operated upon so brilliantly were taken in the very early stage. He had seen Winter (Berlin) place a patient on the table with the diagnosis not made. The microscopist was at his side and if there was any doubt on the subject the extirpation was done. That was why the statistics from across the water were so much better than they were here. If the operation could be done before there was an involvement of the pelvic, lumbar and posterior mesenteric glands there was a chance for the patient. Dr. Moore would not for a moment deny treatment to a case of tuberculosis where the prognosis was bad. Why should the surgeon deny treatment when he knew positively that he at least prolonged the chances of the patient's life and there was the possibility of bringing some comfort to the patient, for even where a lethal outcome was unavoidable it was an undoubted fact that these patients did not suffer to that degree as those left alone. Where the uterus had been removed, when recurrence did take place it was not connected with so great a degree of suffering. Even from this standpoint the surgeon was justified in performing the operation. Of course this whole question was in just about as undecided a position as it was a number of years ago, and it would still be for a long time to come. It was the same as with tuberculosis. The remedy was known, but it could not be applied so that it would reach the site of infection. If the focus could be reached and reached in time, the disease could be cured, and not until then. It was a fact that since radical operation had been introduced the number of recoveries reported and the length of life had been increased. The anatomical conditions between the two forms of the disease were radically different and it would never be possible to do as radical an operation, even with the attempt to clear out the glands, as in operations on the breast where the glands were readily accessible.

A PRACTICAL, NOVEL AND RATIONAL TREATMENT OF GAPING WOUNDS, FOLLOWING EXTENSIVE SEPTIC INFECTION.*

By J. F. Menestrina, M. D., of St. Louis.

There is hardly a subject in surgery that appeals for conservative, yet heroic, surgical treatment more than septic conditions. It is really pitiful to see how often the busy surgeon neglects this most important class of cases, either through fear of contamination or for other reasons. Frequently we see a feeble attempt made in the way of incisions and proper drainage.

The object of this paper is to show that one need not hesitate in laying open, by free incisions, phlegmonous deposits of all sorts, when subsequently they can be quickly repaired without much pain and disfiguring. The duty of the modern surgeon is not confined solely to the proper opening of every recess and drain of septic conditions, but, as soon as the infection has subsided, to restore the large, gaping wounds to a state of as near normal condition as possible with the least visible mark of traumatism, and in quick time. Heretofore this class of wounds was allowed to gradually heal up by granulations, subsequently by cicatrization, frequently by skillful skin grafting. That this takes a long time and causes much suffering is conceded. The result is, an unsightly cicatrix that offends the eye. With the treatment instituted in a dozen or more cases of this nature, this was all avoided. All cases selected were of the most virulent type of streptococcus infection, and in no case complete union failed to occur shorter than ten or twelve days after the incipiency of the infection. The patient I present is an example of the results obtained by the method described.

Fr. D., a laborer, age twenty-four years, was admitted to the Protestant Hospital, June 3, 1905, with a very painful swelling of the left arm; temperature, 105° F.; pulse, 130, very weak and thready. He was a very sick man. A small opening in the hand had been made in an attempt of drainage, but it was insufficient for the purpose. On pressure near the elbow, the pus spouted out in a stream from this opening, showing the extent of the pocket. Without hesitation I laid open the entire arm to the elbow, the wrist and dorsum of the hand. Only then I could realize the extent of the destruction wrought on subcutaneous structures. I could lay my entire hand in the folds of the wound. The infiltrated condition, devitalized by the suppression of the normal circulation, had already succumbed to the inroad of millions of micro-organisms, which microscopical examination proved to be the dreaded streptococcus. All subcutaneous structures, superficial fascias, lymphatics, etc., were involved in the necrotic process, the veins also participating in the disturbance. Thrombosis was present, intensifying the existing stagnation. The bottoms of this pocket were counter-opened freely, and the

* Read before St. Louis Medical Society, July 1, 1905.

wound was packed very gently with loose iodoform gauze, no attempt being made of forcibly washing or curetting the cavity. (I want to emphasize this point, for the thrombosed condition of the veins is a work of nature. It is a protection for the prevention of metastasis, and under no circumstance should it be interfered with. The forcible curetting out of this work of nature, as is practiced so often, disseminates the infection and interferes with provident nature's work.) Moist gauze, soaked in normal salt solution, was next applied, then cotton liberally encircled the arm; rubber tissue and bandage last.

The arm was elevated on pillows, and hypodermics of codeine sulph. given liberally, to the comfort of the patient. Dressings were not removed until the third day. Sloughing surfaces had begun to separate and here and there granulation had started. The wound was packed gently again, preceded by light irrigation of normal salt solution. This procedure was repeated daily until the seventh day, when every vestige of slough had separated, and healthy granulation filled the pocket. He was placed then under an anæsthetic, the wound was thoroughly scrubbed with a sterile brush, and squeezed dry by gauze sponges; then mopped out quickly with 1-500 sol. of bichloride mercury; then immediately irrigated with normal salt solution. The wound edges, which had separated two inches in width by infiltration, had to be resected loose, to allow the edges of the skin to come together.

A thin slice was removed from the edge, to make possible adhesions, and the wounds were boldly united by silkworm sutures. The tension at places was intense, owing to infiltration of the tissues, especially the wrist, where I was compelled to make parallel incisions to allow approximation of the edges of the wound. I was gratified to get union by first intention, and sutures were removed on the fifth day. A little necrosis occurred at the wrist, owing to the great tension, but this healed rapidly by granulation. From the incipiency of this most virulent form of destructive process, to the time of removal of the sutures, only twelve days had elapsed to complete union.

In conclusion, I would make a strong appeal to those who come in charge of such cases to follow this form of treatment, and they will be gratified at the almost incredible result. Undoubtedly a great number of streptococci must still be present at the time of suturing the wound; what becomes of them has been an enigma to me. If alive, they must be rendered innocuous and are absorbed by the granulations, or are forced into the general circulation by the tension of the tissue in suturing. What I am positive of is, that if any are left after the procedure above described, they cannot interfere with nature's work of repair.

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EDITORIAL.

THE ST. LOUIS CITY HOSPITAL.

From the ruins of the old city hospital, destroyed by the cyclone in 1896, there has arisen, phœnix-like, a magnificent institution built on the pavilion plan which fairly represents modern ideas of hospital construction. While only five of the fourteen buildings are completed thus far, room has been provided for 400 patients. The sick poor of St. Louis can hereafter have such surroundings as should be furnished by a great city. The wards are supplied throughout with a ventilating system which assures abundance of fresh air. The plumbing is modern in every respect and the system of heating is the latest and most approved. The twin operating rooms should be on the third instead of the second floor and the opal glass flooring and wainscoting will undoubtedly be changed, as the glare is decidedly objectionable.

Now that St. Louis has a charity hospital which compares favorably with those of other great cities, the city council should be impressed with the necessity of having the institution conducted as is done by all other great municipalities; first, for the benefit of the city's sick poor, by providing the most skillful medical attention; second, for the benefit of the undergraduate student, by providing instruction in practical medicine, and third, for the benefit of humanity in general by providing postgraduate opportunities for the medical profession.

The institution should be under the jurisdiction of medical directors to be appointed by a governing board. The governing board should also appoint a layman-superintendent, who would be the executive head of the hospital. The medical board should appoint a house surgeon, who would be an assistant to the superintendent, and a visiting staff consisting of surgeons, internists, gynecologists, neurologists, obstetricians, laryngolo-

gists, dermatologists, oculists, otologists, pediatrists, pathologists, and dentists, each for a period of six months or one year. The internes should be selected by competitive examination held by the visiting staff.

Then the pauper sick would be given the advantages (now enjoyed only by those more fortunate) of the best medical treatment; the undergraduate student the greatest possible advantage in clinical medicine; and the medical profession the opportunity of dealing with a number of interesting cases which otherwise might escape notice.

An able paper on the subject was read last winter by the retiring president of the Medical Society of City Hospital Alumni, but so far as is known, nothing definite has been accomplished. The time has arrived for the medical profession of St. Louis to unite in an effort to secure the desired legislation.

COUNTY ORGANIZATION.

The unification of the medical profession has been the slogan since the reorganization plan was adopted in 1891. The spirit which permeates the profession in the organized as well as unorganized states is the direct result of this new plan advocated but four years ago. The marked improvement in conditions is apparent to the most casual observer. In this plan of reorganization the importance of the county society is the recognized fundamental principle; hence every effort has been made to develop the county or local society. Dr. McCormack as chairman of the committee of organization has been devoting a large part of his time in the past few years to organization work. Hereafter all his efforts will be devoted to building up the county society. He has gone from county to county and state to state and acquired a knowledge and experience which can be imparted with great benefit to the practitioner as well as stimulate the local societies to emulation.

The machinery all over the country is practically complete, and results must now be looked for. To the county society we must look for the solution of many of the perplexing questions. The local organization should educate the people against quackery and the nostrum evil, and methods adopted as to how best deal with same. Again through it, better relations between the pharmacist and physician must be brought about. The spirit of "Unity, Peace, and Concord," as well as scientific progress will be fostered. The society germinates a sense of professional pride. The offender in professional conduct and courtesy may be reproved not by bringing such an one to trial, but by admonition and reasoning of the censor, who should always be able to play the role of peacemaker and reformer. Often through ignorance a physician will permit his name to come before the public in a manner obnoxious to the profession. In the majority of cases private and moral suasion will suffice in making such an one desirous of standing among his fellows. The society will do away with unnecessary criticism of each other and have more peace conferences and fewer battles.

In the crusade which is now being waged against tuberculosis the county society should be the potent factor.

Through it the people should be taught how to live so as to escape this awful scourge, and in this the doctor should be what the name signifies—*a teacher*.

It is only through organized effort that the best results can be accomplished, and in this scheme of organization "the county or local organization is recognized as the most important; next the state organization, and of least importance the American Medical Association." Every effort that has been made by the American Medical Associaton in developing and completing the organization has been with the above principle in view and when once perfected it will be a power for good, whose limit knows no bounds. S. S.

JUDICIAL COUNCIL.

At a recent meeting of the Executive Committee of the Judicial Council, the members were disposed to criticise harshly some advertisements of proprietary remedies carried by the JOURNAL, and decided to discontinue all those where the formula was not known or where claims not founded on fact were made. The correctness of the decision of the committee is beyond question.

While it may be considered within the province of a medical journal to bring to the attention of its readers, through its advertising columns such preparations as are meritorious, no article should be advertised unless the chemical formula be given, or in the case of a pharmaceutical compound unless the name and proportion of each active ingredient appear.

That many advertisements may be lost is quite probable, but the time has arrived when a firm stand should be taken, not only by the *Journal of the American Medical Association* and state journals, but by all reputable medical journals.

WORTH COUNTY.

That the councillor of the third district is wide awake we do not question. Through him the Harrison County Medical Society affiliated with the State Medical Association during August, and on September 15th the Worth County Medical Society made application for a charter. We congratulate Dr. E. H. Miller on his success in demonstrating to the physicians of unorganized counties the advisability of becoming a part of the State Medical Association.

THE LOCAL COMMITTEE ON THE PREVENTION OF TUBERCULOSIS.

It will be remembered that a resolution was passed at the last meeting of the state association asking that each county society appoint a special committee on tuberculosis. The intention is to have these committees gather, as far as possible, statistics from the members to be used by the state association. Also to use whatever methods may be best suited for arousing local interest and giving instruction for the safety of the home and the prevention of disease in the school, shop and store. These committees should be appointed very early so that results may be forthcoming within the year.

Missouri is well in advance in the practical work of prevention of tuberculosis. Our state sanatorium will undoubtedly be a success. The Board

of Commissioners hope to make such a good showing that they can expect the hearty support of every member of the profession when more state aid is needed. Already much time and thought has been given and a site selected which seems to be most excellent. The work is, however, only in its incipiency. It should not be confined to building and maintaining an institution. While this is valuable it can only directly benefit probably less than five per cent. of the cases of consumption in the state. The same is true with the city and private sanatoriums now building in different places —the main benefit is educational. It is needed that something teach the people that tuberculosis is limitable, and in the early stages is curable. The sanatorium will help to do this. Then these committees from county societies can oversee the distribution of instructive literature and provide for lectures and inspection. When consumption is understood by the people to be in the same class of parasitic diseases as small-pox, diphtheria and cholera, and that it can be limited by similar care and knowledge, the question of prevention is ready for solution. Our state is in excellent condition for thorough agitation of this subject. While the ultimate call to action is with the public, the teachers and the lawmakers, the immediate responsibility is with the medical profession.

In two ways can this responsibility be met. First, by local organized effort; second, by united support of our State Sanatorium, and by insisting that it shall be not only a home for the individual sufferer, but a center of education for the people whose representatives have furnished the means for its establishment.

Let each member of the State Association, and each officer of county societies appreciate that the work is not more the duty of the specialist or a central committee than it is his duty, admitting neither of transfer nor delay. Light is breaking in on us as to the methods of combatting tuberculosis and the issue must be met squarely and intelligently. Let us have the local committees formed at once. W. P.

OBITUARY.

Dr. Adolphus Schlossstein died at his residence in St. Louis on August 28th. Dr. Schlossstein was stricken with apoplexy and his death resulted from that. Born in Bavaria in 1841, Dr. Schlossstein attained a thorough medical education in Germany and served some time in the hospital corps of the German army before coming to St. Louis in 1867. He was a member of the St. Louis Medical Society and of several German societies.

Dr. Will Rininger, of St. Louis, died at his home on August 22th, as a result of burns received from the explosion of benzine while working in his laboratory. He was born in Tiro, Ohio, and was thirty-two years of age. He graduated from the Marion-Sims Medical College of St. Louis in 1899. He was assistant to the chair of nervous diseases at the Marion-Sims Medical College, and chief of the clinic of nervous diseases at St. John's Hospital. He was a member of the St. Louis Medical Society and the American Medical Association.

Dr. Henry D. Stauf, of St. Louis, disappeared from his home on July 28th and on August 12th his body was taken from the Mississippi river at Barrows, Tennessee. Dr. Stauf had been in poor health for some time and it is supposed he wandered to a favorite fishing resort near Barrows and was accidentally drown. He was forty-two years of age. He was graduated from the Missouri Medical College (medical department of Washington University) in 1885.

NEW MEMBERS.

Andrews, John, Grant City.
Bonning, A. H , Lincoln.
Broyls, F. H., Bethany.
Bryson, E. H., Bethany.
Buckley, J. F.
Bunch, B. F., Bloomington.
Carter, Howard, Webster Groves.
Chiff, J. K., New Hampton.
Davenport, R. G., Trenton.
Dove, J. D. F., Allendale.
Eads, E. H., New Hampton.
Eimbeck, A. F., New Haven.
Eimbeck, W. F., New Haven.
Ellis, C. A. Maryville.
Foster, J. P., La Crosse.
Gately, Villa, Grant City.
Gebhart, A. C., St. Joseph.
Gibson, H. C. Maryville.
Gwinn, G. E., Bethany.
Hale, Jesse W., Greenville.
Hempker, W. H., Catawissa.
Jones, C. H., Brunot.
Lemon, F. F., Lincoln.
Long, A. C., Denver.
Mason, L. O., Bevier.
McKinley, W. E., Grant City.
McLemore, T., Nevada.
Mills, H. P., Sheridan.
Mills, O. P. M., Grant City.
Mitchell, C. A., Blythedale.
Moore, T. E. Edingburg.
Nesbit, Dr., Sheridan.
Noblitt, Wm. D., Lively.
Nulton, Ida M., Livonia.
Phipps, J. K., Grant City.
Rice, Dr. Boonville.
Robertson, C. H., Eggleville.
Robertson, C. W., Ridgeway.
Robertson, W. A., Allendale.
Russell, John J., Deepwater.
Rutledge, J. E., Festus.
Salyer, C. E., Callao.
Sellers, C. J., Mt. Moriah.
Simpson, A. J., Chillicothe.
Smith, T. J., Grant City.
Snow, Edward A., Union.
Stewart, B. S., Bethany.
Stierberger, E. A., Union.
Stonington, E. L , Mt. Moriah.
Thompson, L., Macon.
Vandwert, A. H., Bethany.
Wiley, W. H., Ridgeway.
Williams, A. W., Ridgeway.
Williams, D. E., Lone Dell.
Wilson, E. H. G., St. Louis.
Woods, Dr., Cape Girardeau.
Wyllie, Barnett, D. S., Union.

COUNTY SOCIETY NOTES.

BUCHANAN COUNTY MEDICAL SOCIETY.

Dr. P. I. Leonard, President.
Dr. Charles W. Fassett, Secretary.

The Buchanan County Medical Society held its first meeting since its summer vacation on September 2d, with a large attendance, Dr. P. I. Leonard, president, in the chair.

A symposium on medical education aroused considerable interest, and a lively as well as profitable discussion ensued. Papers were read by Drs. T. E. Potter, O. B. Campbell and W. L. Kenney.

Interesting clinical cases were reported by Drs. W. T. Elam, A. L. Gray and F. A. Patterson.

On motion of Dr. J. M. Bell, a standing committee of the society was appointed to look into the credentials of irregular practitioners, not regularly registered, as well as to stop all itinerant quacks who are not legally registered in the county. The committee consists of Drs. J. M. Bell, W. T. Elam and O. B. Campbell.

On motion of Dr. Elam, the society passed a resolution introduced by Dr. Donelan, asking the local board of health to demand a report of all cases of incipient and later stages of tuberculosis in school children from the physicians who know of or treat such cases.

The subject chosen for discussion at the next meeting on September 16th is typhoid fever, opened by Dr. McGlothlan.

C. A. Good, Reporter.

CALLAWAY COUNTY MEDICAL SOCIETY.

Dr. J. F. Harrison, President.
Dr. Martin Yates, Secretary.

The Callaway County Medical Society held a meeting in the office of the secretary on September 14th, Dr. Harrison presiding. Eight members were present. Dr. P. E. Williams, superintendent of State Hospital No. 1, transferred his membership from Cooper county to Callaway county.

Dr. A. E. Cordonier, pathologist to the State Hospital, presented two specimens, one a stomach illustrating carcinoma of the pylorus taken from a man aged forty-five. The other was also a stomach from a man aged eighty, showing ulcers of the pyloric portion and general gastritis. This specimen was abnormally contracted with hypertrophied walls.

Dr. Owen, of Fulton, read a paper on "Erysipelas." This was well received and aroused a very interesting discussion.

Dr. Baker, of Fulton, read a paper on "Appendicitis." Special attention was directed to the indications for surgical intervention and the best time to operate. A general discussion followed the reading of this paper.

This is the first meeting Calloway County Medical Society has held for several months. The next meeting will be held in October and we look forward to an interesting report of this meeting.

Martin Yates, Secretary.

CHARITON COUNTY MEDICAL SOCIETY.

Dr. H. C. Tatum, President.
Dr. C. A. Jennings Secretary.

Chariton County Medical Society convened in regular session on August 31st at Salisbury, the president, Dr. Tatum, presiding. Minutes of last meeting were read and approved.

Dr. Welch presented a child of ten months, female. The mother stated that en route to St. Charles five months ago, the child had a convulsion and another later while at home. The seizures did not come on at any stated time, the longest interval between attacks being four weeks. The child was cutting teeth and has two incisors; temperature never over 102°. The case was discussed, the general opinion being that the convulsions were epileptiform. A number of other clinics were introduced and the cases generally discussed.

As the time had been almost wholly occupied with the clinics, the papers were omitted and the essayists, Drs. Jennings, Gaines and Burton were requested to present their papers at the next meeting which will be held at Salisbury on September 29th.

W. L. Baker, Reporter.

GRUNDY COUNTY MEDICAL SOCIETY.

Dr. N. E. Sutton, President.
Dr. W. H. Winningham, Secretary.

The regular meeting of the Grundy County Medical Society was called to order by the president, Dr. Asher, on July 26th.

Officers for the ensuing year were elected as follows: President, N. E. Sutton; vice-president, J. H. Addington; secretary and treasurer, W. H. Winningham.

On motion the office of secretary and treasurer was combined.

Dr. Addington, the delegate to the state meeting, made his report. On motion the president was appointed chairman of the committee on scientific communitions. The following committees were appointed:

Arrangements—Drs. S. Stewart, W. C. Hunter, J. A. Travis.

Judicial—Drs. J. A. Asher, S. Sheldon, J. M. Stone.

Scientific Communications—Drs. N. E. Sutton, J. B. Wright, W. H. Winningham, J. H. Addington.

Medical Education — Drs. A. L. Hough, Bertha Wiggins-Sutton, W. H. Winningham.

Publication—Drs. W. D. Fulkerson, J. A. Asher, S. Sheldon.

On motion Dr. Addington and Dr. Wright were requested to prepare papers for the next meeting.

W. H. Winningham, Sec'y.

JACKSON COUNTY MEDICAL SOCIETY.

Dr. Robert T. Sloan, President.
Dr. Max Goldman, Secretary.

The Jackson County Medical Society held its first regular meeting of the season at the Midland Hotel, Kansas City, Thursday evening, September 14th, the president, Dr. Robert T. Sloan, in the chair.

Preceding the regular professional program, remarks from members relating to any interesting cases on hand were called for, and Dr. Scott P. Child opened a general discussion on the early clinical diagnosis of diphtheria and the use of immunizing doses of antitoxin. He reported some

recent cases illustrative of the value of early clinical diagnosis. The report was discussed by Drs. C. Lester Hall, E. L. Stewart, A. J. Welch, H. E. Pearse, J. W. Kyger and E. G. Mark.

The program of the evening consisted of a paper on "Drainage in Pelvic Surgery" by Dr. T. J. Beattie, and a "Report of Some Recent Surgical Cases" by Dr. A. L. Fulton.

The subject of drainage in pelvic surgery is one which has been for many years of great interest to surgeons in general and gynecologists in particular. Though the question as to the advisability of drainage has undoubtedly been settled long ago, the method of draining the pelvic cavity properly is a problem regarding which there is still some difference of opinion. The paper by Dr. Beattie on this subject had for its object the demonstration of the most practical way of draining the pelvic region, and his idea was stated emphatically in the last sentence of the essay: "Cul-de-sac (Douglas's) drainage is the most desirable method; drain by packing loosely with gauze and withdraw a little of the gauze each day."

The essayist reviewed the history of drainage in pelvic and abdominal surgery, and after stating that drainage is an absolute necessity when pus has escaped into the pelvis or abdomen, he added that even though we may find sterile (gonorrheal) pus, or whenever there is a suspicion of a mixed infection, drainage should be employed. He then stated his objections to the use of the glass tube in the obdominal incision, and of gauze packing in ordinary pus cases, and considered the value of cul-de-sac drainage by means of iodoform gauze.

The discussion of this paper was opened by Dr. H. C. Crowell, who stated that the style of drainage often depends upon the judgment of the surgeon in each individual case. However, every pus case must be drained, not only in order to protect the tissues infected, but also to draw off all infecting material. Glass tubes, he said, not only do not draw off the fluids, but allow the entrance of bacteria to the wounded area. Often pelvic drainage per vaginam is used in addition to abdominal or peritoneal. In cul-de-sac drainage of pus cases, or whenever a large denuded surface is left, as after hysterectomies, a rubber tube should be used in addition to the gauze; this is of value in the removal of excessive amounts of serous exudate. Dr. Crowell closed by considering the time one ought to leave the gauze drain undisturbed; his custom is to let it remain from five to eight days for the purpose of allowing a framework of granulation tissue to grow up; more satisfactory conditions are thus presented, the gauze is more easily removed and subsequent dressings are rendered easier.

Others taking part in the discussion were Drs. C. Lester Hall, E. Von Quast, O. H. Parker, B. L. Eastman and A. E. Hertzler. Dr. Beattie closed the discussion.

Three recent surgical cases were reported by Dr. A. L. Fulton. The first was a case of direct inguinal hernia in a man aged thirty-five years. The ordinary careful preparations were made, and no unusual conditions were observed at the time of operation. The patient, however, on the second day after the operative inter-

ference, gave positive symptoms of intestinal obstruction and died twelve hours later. Just before his death he remarked that on the evening before operation he had, after considerable difficulty, reduced the hernia, which had descended and did not return as usual when he retired. At the autopsy there was found a large knuckle of ileum totally gangrenous and lying against other parts of the intestines.

The second case reported was one of adeno-carcinoma of the descending colon, causing almost total occlusion, in a woman fifty-eight years of age. The portion involved was removed and an artificial anus was formed in the ordinary manner. Since this operation the patient has improved very much and has gained in weight considerably in the last few months.

The third case reported by Dr. Fulton was an extra-uterine pregnancy in a young unmarried woman. The interesting features of this case were, first, an extremely large collection of blood in the postuterine cul-de-sac after an attack of sudden pain in the abdomen, and apparent collapse, with very rapid pulse but normal temperature, for which vaginal celiotomy was performed, followed by her rapid recovery; and, secondly, after her removal from the hospital, hysterical manifestations, which were characterized by the gradual development of mental disturbances followed by a comatose state so profound that involuntary actions from the bladder and rectum took place, though occasionally she would rally sufficiently to take some nourishment. These conditions of improvement and relapses continued for four weeks, and were then followed by complete recovery. The question of greatest interest seemed to be: "What was the circumstance that produced the hysteria in this case of extra-uterine pregnancy in an unmarried girl of eighteen years, who had been previously in apparently good health and always regular in her menstrual periods?"

Dr. Howard Hill discussed the cases and Dr. Fulton closed the discussion.

The society adjourned till its next regular meeting, September 28th.

MAX GOLDMAN, Secretary.

ST. LOUIS COUNTY MEDICAL SOCIETY.

Dr. H. G. Wyer, President.
Dr. H. T. Randle, Secretary.

Regular meeting of the St. Louis County Medical Society convened at Clayton, September 13th, the president, Dr. Wyer, in the chair. The following members were present: Drs. Wyer, Carter, Armstrong, Higgins and Moore. In the absence of the secretary, Dr. Armstrong was appointed secretary pro tem. Minutes of the last meeting were read and approved.

The essayist for the evening, Dr. Gallagher, was not present and failed to send his paper to the meeting. Dr. Carter moved that the secretary be instructed to collect $1.00 from Dr. Gallagher as a fine for having failed to send in his paper to be read before the society. The motion carried.

Dr. Moore moved that the president appoint a committee of three to draft a circular letter setting forth the advantages of membership in the county society, and inviting all physicians in the county to become members; that this letter be mailed to all members

in the county who are not now members of the St. Louis County Medical Society.

Dr. Carter moved to amend the motion so that the president shall be included in the committee. Carried. The president appointed Drs. Carter, Moore and Higgins.

The president reported two interesting cases from his practice, one a confinement with high forceps delivery. A high fever developed on the eleventh day, although there were no septic conditions nor malaria. The probable diagnosis was colitis. The other case reported was typhoid fever in an infant of fifteen months.

Dr. Moore reported a case of severed tendo-Achilles. Two unsuccessful attempts were made to suture the segments. Union finally resulted by cicatrization.

Dr. Moore extended an invitation to the society to meet at his residence in Webster Groves in October, which was unanimously accepted. The next meeting will be held on the second Wednesday in October at the residence of Dr. Moore in Webster Groves.

C. L. ARMSTRONG,
Secretary Pro Tem.

NODAWAY COUNTY MEDICAL SOCIETY.

Dr. F. R. Anthony, President.
Dr. L. E. Dean, Secretary.

Nodaway County Medical Society held its regular meeting in Maryville on September 12th. There being only six members present, the regular business of the society was postponed, and the scientific program was taken up as follows: "The Dangers of the Curette and Intrauterine Applications," by Dr. G. A. Nash; "The Present Status of Nodaway County Medical Society," by Dr. E. L. Crowson.

Dr. Nash was unable to be present on account of illness, and Dr. Crowson's paper was read. In an able manner the essayist presented the reasons why our county society did not have better attendance of members, especially of those from the smaller towns in the county. It was suggested to write each member that he would be expected to read a paper at some future meeting of the society, the title to be forwarded to the secretary, who would make a list and arrange for the dates of reading so as to insure the presentation of two or three papers at each meeting. Dr. Crowson's paper brought out an interesting discussion of this subject from all the members present. We hope that future meetings of our society will be attended by every member. Excellent programs have been arranged but the attendance has not been as large as it should be. Our regular meeting place is now in the hall of the Carnegie Library in Maryville, and a more desirable meeting place could not be found. It is earnestly urged that all members make an effort to attend every meeting.

Members present: Drs. F. R. Anthony, W. M. Wallis, A. B. Allen, J. W. Dean, E. L. Crowson, L. E. Dean. Visitor, Dr. A. F. Fisher of Maryville.

The next regular meeting will be held on October 10th, in Carnegie Library Hall, Maryville.

L. E. DEAN, Secretary.

RANDOLPH COUNTY MEDICAL SOCIETY.

Dr. G. O. Cuppaidge, President.
Dr. W. M. Dickerson, Secretary.

Randolph County Medical Society held its regular meeting in Moberly on September 13th, the president, Dr. Cuppaidge, in the chair. Dr. Clakerson read a paper entitled "Ownership of Prescription." The members expressed their high appreciation of this paper, and the points brought out by the essayist were generally discussed.

The next meeting will be held in Moberly on October 10th.

S. C. ADAMS, Reporter.

BARTON COUNTY MEDICAL SOCIETY.

Dr. G. D. Allee, President.
Dr. J. L. McComb, Secretary.

Barton County Medical Society was unable to meet at the stated period on August 3d, on account of high water and heavy rains. The next meeting will be held in November, when it is hoped there will be a full attendance of the membership.

J. L. McComb, Secretary.

CARTER-SHANNON COUNTY MEDICAL SOCIETY.

Dr. F. Hyde, President.
Dr. J. A. Chilton, Secretary.

The regular quarterly meeting of Carter-Shannon County Medical Society failed to transact any business on account of the lack of a quorum. The next meeting will be held in November, and a full attendance of the members is earnestly desired. A report of this meeting will be promptly forwarded to the JOURNAL.

J. A. CHILTON, Secretary.

FRANKLIN COUNTY MEDICAL SOCIETY.

Dr. H. A. Booth, President.
Dr. A. C. Brown, Secretary.

The regular monthly meeting of the Franklin County Medical Society was called to order in the office of Drs. Booth & McNay, at Pacific, on September 5th. Among those present were Drs. J. P. Dunnigan, A. L. McNay, E. L. Hume, W. H. Kempker, John Rusk, E. McD. Rusk, William F. Eimbeck and A. C. Brown.

A number of cases were reported. The discussion of the treatment and management of these cases proved of great interest.

Dr. E. L. Hume read a paper entitled, "Hospital and Aseptic Conditions in Country Practice." A general discussion of the paper followed.

Dr. John Zahorsky, of St Louis, has kindly consented to read a paper before the society at its next meeting in December. It is earnstly hoped that every physician in the county who can do so will be present at this meeting.

A. C. BROWN, Secretary.

HENRY COUNTY MEDICAL SOCIETY.

Dr. W. M. Shankland, President.
Dr. F. M. Douglass, Secretary.

The program prepared for the regular meeting of Henry County Medical Society was of exceptional interest. The meeting was announced for September 11th, at Clinton, and it was anticipated that there would be a large attendance and an interesting discussion on the papers to be read. The four members who arrived, therefore, were greatly disappointed, and

for the lack of a quorum adjourned until the next meeting. Those present were: Drs. F. M. Douglass, R. D. Haire, J. H. Britts and W. H. Benway.

The time of meeting has been changed from monthly to quarterly, and the next meeting will be held on the second Wednesday in December.

Dr. John J. Russell, of Deepwater, has renewed his membership with the society.

F. M. DOUGLASS, Reporter.

JEFFERSON COUNTY MEDICAL SOCIETY.

Dr. W. H. Farrar, President.
Dr. H. W. Elders, Secretary.

Jefferson County Medical Society met in regular session at the Alta Vista Sanitarium, in De Soto, on August 22d.

The president appointed Drs. Geo. W. Tidwell, J. W. Pickel and H. W. Elders a committee on public health.

Several very interesting papers were read and made the subject of a general discussion.

After the conclusion of the scientific program the members were entained with refreshments and cigars and an informal discussion of the society's progress was taken up. All the members present enjoyed the meeting very much and decided that this sort of soci bility was just what is needed to bring the members together. H. W. ELDERS, Secretary.

LAFAYETTE COUNTY MEDICAL SOCIETY.

Dr. P. S. Fulkerson, President.
Dr. C. T. Ryland, Secretary.

The extremely bad roads and heavy rains prevented the majority of members of Lafayette County Medical Society from attending the September meeting which was scheduled for September 12th. As there was a quorum present, routine business was disposed of and a special meeting was called for the second Tuesday in October, when the program arranged for the September meeting will be carried out.

Dr. C. T. Ryland was appointed to represent the society on the scientific program of the next annual meeting of the State Association.

We look forward to an interesting report of the October meeting.

C. T. RYLAND, Secretary.

NEWTON COUNTY MEDICAL SOCIETY.

Dr. J. W. Lamson, President.
Dr. Horace Bowers, Secretary.

The regular monthly meeting of the Newton County Medical Society convened at the court house in Neosho at 2 P. M. on September 5th, twelve members being present. The majority of the physicians in Newton county are members of the County Medical Society and the meetings are full of interest and profit for them. Our society is in a good healthy condition. Usually we have two papers read, followed by discussions and reports on clinical cases. All the members are requested to report interesting clinical cases and present patients at the meetings, where they can be examined by the members and the conditions made the subject of profitable discussion. Presentation of these cases adds greatly to the success of the meetings.

Some of the papers that have been read at former meetings will be for-

warded to the JOURNAL for publication.

The next meeting will be held on October 10th.

HORACE BOWERS, Secretary.

HARRISON COUNTY MEDICAL SOCIETY.

Dr. A. H. Vandwert, President.
Dr. W. H. Wiley, Secretary.

Harrison County Medical Society was organized in August and admitted to full affiliation with the State Association. The first regular meeting was held at Bethany on September 12th. The attendance at this meeting was not as large as had been anticipated, owing to a counter attraction in the shape of a street fair in Bethany. A large proportion of the membership, however, attended the meeting, and what was lacking in numbers was made up in the interest and enthusiasm of those present.

The president was called to Maryville to fulfill his duties as regent of the Northwest Missouri State Normal School, and in his absence Dr. C. A. Mitchell was called to the chair.

Dr. Gwinn read an able paper on "Otitis Media," in which he explained many of the stubborn problems encountered in the diagnosis and treatment of this disease.

Dr. Mitchell read a paper on "Professional Affiliations." This was a splendid essay on the duties of physicians one to another. Dr. Wiley reported a recent case of appendicitis with rupture, which is published below in full.

Two new members were added to the roll.

W. H. WILEY, Secretary.

Dr. Wiley's paper was as follows:

APPENDICITIS: RUPTURE; GENERAL INFECTION; DEATH.

On August the 2d, I was called to attend Miss C., age twenty-four, who was suffering with intense pain in the right iliac region and vomiting incessantly. Inquiry elicited the fact that patient had been a sufferer from dysmenorrhœa for some time, with considerable pain in right groin at each menstruation. Suspecting appendicitis, but unable to establish this until ovarian or uterine disease was positively excluded, a definite diagnosis was deferred to a subsequent visit.

August 3d, pain and vomiting continued, with temperature 101 degrees F. Tumor increased to about two by four inches in diameter, the upper border of which was considerably below McBurney's point, which led me to believe it possibly only an abscess forming in the upper chain of inguinal glands. However, a subsequent visit late in the evening of the following day convinced me that it was appendicular, as the tumor had developed to such an extent, and the general symptoms of pus formation were so apparent that all else could be readily excluded.

It being then dark, I left my patient, with instructions to her parents to consider the question of surgical intervention till the early morning, when help would be summoned and the question finally decided.

I was hurriedly summoned at 2 A. M. and found my patient had had a severe chill; the abscess had ruptured and the tumor could not be detected upon examination. There was also a profuse hemorrhage from the uterus.

Drs. Williams and Robertson were called in consultation as to the advisability of operating, but the patient had rallied and was free from pain. The fever, which was 105 degrees F. but a short time before, had subsided to 101 degrees F., and the symptoms generally were seemingly so much improved that we decided to follow the expectant plan of treatment. The improved condition, however, was only the calm before the storm, as local peritonitis, with general distention of the abdomen, soon developed, carrying the patient into a moribund condition, when all hope from surgical relief soon vanished and we could but wait the end, the beginning of which was soon apparent, the patient dying at 6 P. M. of the ninth day from the beginning of the attack. Thirty minutes after death we opened the abdomen and about one quart of pus escaped. The appendix was brought into view and a laceration about one-half its length, beginning at the proximal end, was found. The privilege of a post-mortem examination of this case was allowed only for the purpose of verifying the diagnosis. Therefore we did not feel justified in searching out all of the anatomical changes caused by this accumulation of pus, but found all contiguous tissue highly inflamed and bound together by extensive adhesions.

In concluding this report let me ask: What do we learn from this case? What lessons are there in it for the general practitioner? First, when certain a case is purulent and rupture imminent, operate. Unless pus should soon pass from the bowels after a rupture, operate. If pus is soon found in the discharges from the bowels the case may be left to nature, as the writer has done in one particular case with good results. To ignore the first law in surgery, namely, when pus is found, let it out, is bad practice in appendicular abscess, as but few cases will rupture into the bowel and drain through natural channels. Consequently, unless soon walled off, a remote possibility in time to prevent general infection, a fatal termination may be expected. The expectant plan of treatment may be best in simple catarrhal inflammation of the appendix, but when the tumor is at all perceptible it is undoubtedly distended with pus and should be drained either before or immediately after rupture.

CASS COUNTY MEDICAL SOCIETY.

Dr. R. D. Ramey, President.
Dr. J. S. Triplett, Secretary.

Cass County Medical Society met in regular session at Harrisonville on September 7th, the president, Dr. R. D. Ramey, in the chair.

The principal paper of the evening was entitled "External Hemorrhoids," by Dr. H. Jerard of Pleasant Hill. This was an excellent paper full of practical points for the general practitioner. The discussion for the most part was along the lines of how this specialty may be redeemed from the quack and charlatan into whose hands a good part of it has drifted, and reclaimed by the general practitoner, where it rightly belongs. Many valuable suggestions were offered along these lines. It was the general belief that the regular physician should make greater efforts to get this work and to acquaint the public with the fact that regular

physicians are, as a general rule, qualified to do rectal work equally as well as other departments of practice.

A quiz on the "Anatomy, Physiology and Muscular Affections of the Eye," was conducted by Dr. F. B. Ellis.

For the last three months the society has been meeting monthly, but the attendance was not as good as had been hoped for, and therefore the quarterly meetings will be resumed.

The society selected Dr. H. Jerard of Pleasant Hill and Dr. J. S. Triplett of Harrisonville to prepare papers for the next meeting of the Missouri State Medical Association, these papers first to be read before the county society and be approved by it.

The society adjourned to meet at Harrisonville December 7th, at which meeting it is hoped for a full attendance. This will be the annual meeting.

J. S. TRIPLETT, Reporter.

GREENE COUNTY MEDICAL SOCIETY.

Dr. W. P. Patterson, President.
Dr. R. M. Cowan, Secretary.

Greene County Medical Society met in the City Hall at Springfield, September 16th, at 8 P. M., the president, Dr. Patterson, in the chair. Minutes of the last meeting were read and approved. Members present: Drs. Patterson, Tefft, Ralston, Farnsworth, Camp, Cox, Nixon, Ross, Boyd, Purselley, Barnes, Fulbright and Cowan. Visitors: Drs. Crane and Allen.

Under report of cases Dr. Farnsworth reported a patient who complained of a tickling in the throat. On examination he found a postpharyngeal abscess. He said these cases are rather rare. He does not remember to have seen more than three or four. Dr. Camp said the difficulty with these cases is to know where to make the incision.

Under regular order of business the subject of yellow fever was the program Dr. Tefft, on the history of yellow fever, said there was little to be found on the subject outside of the text books. The first epidemic in this country was in Boston during the seventeenth century. Since that time there had been epidemics about every ten or fifteen years. The epidemic of 1878 was the most general. The usual boundaries for yellow fever are below the thirty-fourth degree of latitude and 1,000 feet altitude. In South America there have been epidemics in altitudes of 14,000 feet, and there have been epidemics much further north than 34 degrees, for instance in Philadelphia. He thought that by taking the two together we would get the boundaries more correctly, that is to say, no epidemics have ever occurred in places above a thousand feet in altitude that were at the same time north of the thirty-fourth degree of latitude.

Dr. Smith, who was to have discussed the "Cause and Prevention," and Dr. Bartlett, who had been appointed to discuss the symptoms, both being absent, the subject was thrown open for general discussion. Dr. Camp said he could not understand why it was that Atlanta, Ga., had no epidemics and Chattanooga, Tenn., did have, especially as the mosquito was the cause.

Dr. Tefft said that yellow fever was analogous to malaria in its propagation, that filth was a suitable midus

for its spread. The difference in the two was that cold weather stopped yellow fever and did not stop malaria. He believes the mosquito is only one of the means of spreading yellow fever. He thinks that sooner or later the theory that the mosquito is the sole distributor of the germ will be abandoned.

ROBERT M. COWAN, Secretary.

STODDARD COUNTY MEDICAL SOCIETY.

Dr. D R. Corbin, President.
Dr. John Ashley, Secretary.

Stoddard County Medical Society held its regular meeting at Bernie, on Wednesday evening, September 6th.

Members present were T. C. Allen, John Ashley, D. R. Corbin, John Douglas, S. M. Evans, A. D. Hill, J. L. Slayden, T. B. Turnbaugh, T. B. Wingo and Geo. W. Vernon

The meeting was called to order by the president, D. R. Corbin, at 6:30 P. M. Minutes of last meeting were read and approved.

Dr. T. C. Allen reported a case of displacement of the heart to the right side. He thought it was congenital as there had been no previous disease of any consequence and no other pathological conditions were present.

Dr. Ashley and Dr. Corbin also reported cases of peculiarity of heart location and heart action.

Dr. A. D. Hill presented the subject of pneumonia, dwelling largely on the treatment. In the first stage he uses purgatives and diaphoretics, and in all sthenic cases he would bleed. After four to six days he uses ammonia carbonate and such other tonics and stimulants as are indicated. In opening the discussion Dr. Turnbaugh said he had never bled, but in the first stage used aconite, veratrum or gelsemium as indicated by condition of the circulation. He also applied a glycerine jacket to the chest, and prescribes expectorants. When the temperature is down and the skin moist he gives quinine.

Dr. Allen believes in less medication and better management. He treats the patient's condition instead of the *disease name.*

Further remarks on pneumonia were made by Drs. Evans, Ashley, Douglas and Corbin.

Dr. S. M. Evans presented a paper on "Scarlet Fever" giving an admirable resume of the disease, dwelling at length on the causation and treatment.

Drs. Wingo and Vernon spoke of the isolated cases occasionally met with and the importance of being constantly on the watch for atypical cases which are frequently the forerunners of epidemics. The subject was further discussed by Drs. Slayden, Hill, Ashley and Turnbaugh.

Dr. Wingo, chairman of the committee on medical legislation, reported that he had sent letters to every physician in the county requesting that they appear before the grand jury and give all the information possible concerning irregular practice.

After the scientific part of the program was finished the regular routine business of the society was transacted and the society then adjourned to meet at Dexter the first Wednesday in December, or thereabouts.

Following adjournment the members were invited to a nearby restaurant, where a half hour was spent

pleasantly around the banquet table, prepared at the instance of Dr. Allen, of Bernie.

These meetings are becoming very interesting from a scientific and practical standpoint, and the doctors who miss them are standing in their own light. There is also a business side to them which is worth much to every physician in the county.

We expect an unusually good program for our next meeting at Dexter, and hope to see every practitioner in the county in attendance. Come, it will do you good, physically, mentally and professionally.

GEO. W. VERNON, Reporter.

MONITEAU COUNTY MEDICAL COUNTY.

Dr. J. B. Stewart, President.
Dr. W. R. Patterson, Secretary.

The regular quarterly meeting of the Moniteau County Medical Society was held in California on September 14th. In the absence of the president, the vice president, Dr. A. V. Thorpe, called the meeting to order. After reading the minutes of the last meeting and allowing bills, the application of Dr. L. L. Latham was received and referred to the board of censors.

Dr. W. Reynolds was granted permission to join the Cooper County Medical Society.

Dr. J. B. Norman lead the discussion on "The Duty of Physicians to their Neighbor Physicians and to their Society."

Dr. J. W. Marsh opened the discussion on "Chronic Diseases of the Liver." These subjects were thoroughly discussed, each member present taking some part in the discussion.

The next meeting will be held on the second Thursday in December.

W. R. PATTERSON, Reporter.

NEWS ITEMS.

The next International Medical Congress will be held in Lisbon, April 19 to 26, 1906. It is expected that it will be one of unusual importance for a meeting which will be held in what has always been considered as an out of the way country. Already the titles of papers from some of the most distinguished men of the medical profession have been received. The meeting will be divided into sixteen sections. Dr. Ramon Guiteras is secretary of the American National Committee.

According to the *Pall Mall Gazette* the Brazilian Chamber of Commerce has devoted the enormous sum of £400,000 as a prize to be given to the scientist who shall discover a really enduring method for the cure of cancer. An international committee is to be formed, consisting of two members of the Medical Academy in Rio Janeiro and of four eminent pathologists chosen from London, Paris and Rome. These six gentlemen will act as the jury in the case of awarding the prize. It is probable that the London journal meant milreis instead of pounds. Four hundred thousand milreis of Brazil would be about $220,000—a tidy little sum even that for a poor doctor to get.—*Med. Rec.*

It is proposed to have the schools of Chicago visited by competent medical inspectors, with a view to ascertaining from the school children the cases of illness in their homes. When such information is obtained the household in which any member is afflicted will be visited, and efforts made to prevent the spread of the disease, and also to improve the sanitary condition. The public school teachers will be requested to report all cases of illness to the bureau, and also the addresses of all houses which they have reason to know are not sanitary. The same plan is under consideration in Kalamazoo, where some years ago a medical inspection of the schools was tried, and during its continuance over two hundred cases of infectious disease, such as scarlet fever, diphtheria, whooping-cough, and so on, where discovered in homes of school children. The work was abandoned for some cause after a few months' trial, but it is believed that it was the proper policy, and the promoters of the new plan are anxious to have the work, or something like it, begun again.—*Medical Record.*

At the next meeting of the Mississippi Valley Medical Association, to be held at Indianapolis, Ind., October 10, 11 and 12, the annual addresses will be delivered by Dr. Arthur R. Edwards, of Chicago, and Dr. W. D. Haggard, of Nashville, Tenn.

Dr. Edwards has chosen for the subject of his address, "Certain Phases of Uremia, their Diagnosis and Treatment," and Dr. Haggard will discuss in his address, "The Present Status of Surgery of the Stomach." In addition to these addresses there will be the annual address of the president, Dr. Bransford Lewis, of St. Louis.

A cordial invitation is extended to every physician in the valley to attend this meeting, for which a large number of interesting and valuable papers have been promised.

On September 1, 1905, by the unanimous action of their respective boards of trustees, the Medical College of Indiana was made the Medical Department of Purdue University, with the title of Indiana Medical College, the School of Medicine of Purdue University.

The Medical College of Indiana was founded in October, 1869, and has given continuous instruction in Indianapolis for the thirty five succeeding years. It has graduated over 1,600 students, has some three score teachers and unexcelled clinical facilities.

Columbia, Mo., has been suffering from an epidemic of typhoid fever. Early in September the disease broke out and at the last report there had been a total of sixty-five cases, with one death. Among those who were sick were Walter Williams, chairman of the executive board of the University Curators, and Howard S. Reed, instructor in botany. The State Board of Health investigated the situation and found the outbreak was probably due to unsanitary conditions in certain localities, caused by defective street drainage and a large number of surface-drained outhouses, which polluted the soil and cisterns near by. The public water supply and milk supply were reported free from con-

tamination. The city officials were urged to use all possible means to put the city in perfect sanitary condition.

The state sanitarium for cases of incipient tuberculosis will be located at Mt. Vernon, in Lawrence county. This decision was reached at a meeting of the board in St. Louis on September 3d. Other towns competing for the hospital were: Mountain Grove, Mansfield, Marshfield, Lebanon, St. James, Cuba, Salem, Bismarck and Cedar Gap. Mt. Vernon gives a site valued at $8,500, a bonus of $7,000, free water and light for five years, and free telephone service for fifty years.

Frederick Stearns & Company announce a reduction in the prices of Stearns' diphtheric antitoxin. At the same time they will discontinue the system of exchanging tubes and set an expiration date of at least eighteen months. It has been found that antitoxin will remain active for this length of time. The new prices are as follows: 1000 units (immunizing) $1.75; 2000 units, $3.00; 3000 units, $4.00. A discount of 25 per cent. is allowed physicians on these prices.

Three druggists were arrested in St. Louis on September 6th charged with violating the new law prohibiting the sale of poisonous drugs. It was found that they were in the habit of selling cocaine, chiefly to negresses. One druggist labeled a box containing cocaine as "calomel" which he sold to a negress. It is stated that this man had a system of signs with his customers, whereby they could obtain cocaine by asking for calomel and making a certain sign with the fingers.

While being taken from his home to the City Hospital in the city ambulance in St. Louis, on August 30th, Henry Daly was thrown to the street and dragged several feet. The team drawing the ambulance was frightened by a passing automobile and ran for half a mile or more. The patient was rendered unconscious by the fall. He was taken to the hospital in another ambulance.

BOOK REVIEWS.

Therapeutics: Its Principles and Practice. By Horatio C. Wood, M. D., LL. D. Twelfth Edition. Thoroughly Revised and Adapted to the Eighth (1905) Edition of the U. S. Pharmacopœia, by Horatio C. Wood, M. D., and Horatio C. Wood, Jr., M. D. $5.00. Philadelphia: J. B. Lippincott Company.

This revised twelfth edition is the result of the radical alterations which have been made in the U. S. Pharmacopœia. In addition to the changes necessary to make this work correspond to the new Pharmacopœia there have been many alterations and additions. The chapters on expectorants and disinfectants have been rewritten and a new systematic classification of these drugs adopted. A detailed consideration of local anæsthesia has been added. Hyoscine has been considered with the delirifacients, camphor among the cardiac stimulants, and carbolic acid with the disinfectants. The considerations on these drugs, morphine and its derivaties, alcohol, methyl-blue, xanthin basis and antitoxines are practically new. Over seventy new drugs have been added.

This treatise is for the student as well as for the practitioner. To meet the difficulties arising from this double function a typographical arrangement has been adopted by which the essentials will catch the eye of the student at once, while the subordinate matter is in smaller print, and those drugs which are of very little importance and which do not concern the student are discussed in small type.

With the revision based on the new Pharmacopœia and owing to the changes in drug strength and the number of new ones now official, this prompt appearance makes Wood doubly appreciated at this time.

Manual of the Disease of the Eye for Students and General Practitioners By Charles H. May, M. D. $2.00 William Wood & Co., New York. In this fourth edition many alterations have been made, many illustrations have been replaced by superior ones. New figures have been added, including eight colored plates, six of the latter presenting twenty-nine color drawings of external disease of the eye.

The author in this as in the former editions has presented the subject in a concise, practical and systematic manner, giving the fundamental facts of ophthalmology and covering all that is essential in this branch of medicine, making it an admirable handbook for both student and practitioner. Theories are kept in the back ground, rare conditions touched on, but the common diseases which come to every general practitioner are discussed in full. This volume is up-to-date, but has not been increased in size and is recommended as a means of supplying a foundation for further knowledge and investigation.

Tumors, Innocent and Malignant —Their Clinical Characters and Appropriate Treatment. By J. Bland-Sutton, Surgeon to the Chelsea Hos-

pital for Women, Assistant Surgeon to the Middlesex Hospital, London. Third Edition, with Three Hundred and Twelve Engravings. $4.50. Chicago, W. T. Keener & Co.

In this edition the author has described deciduoma with the sarcomata provisionally. Primary cancer of the fallopian tube is considered as a clinical entity. Myelomata and ovarian fibroids have been rescued from the banal society of the sarcomata. Additions, including observations on latent fibroids, and the malicious association of fibroids and pregnancy, have been made. The term epithelioma has been abandoned and is replaced by the phrase squamous-celled cancer. The section on echinococcus colonies has been restored.

Opthalmic-Neuro-Myology. By G. C. Savage, M. D. A Study of the Normal and Abnormal Actions of the Ocular Muscles From the Brain Side of the Question. Published by the Author. Nashville, Tenn.

In setting forth the result of his study of the normal and the abnormal action of the muscles of the eye from the brain side of the question, the author has endeavored to simplify the solution of ocular muscles.

The working hypothesis is that there are eight conjugate brain centers in the cortex by means of which the several versions are effected, and one conjugate center by which convergence is caused. Each of these centers is connected with two muscles, and the work done by the center and its muscles, under guidance of volition, is normal work.

There are twelve basal centers, each connected with only one muscle. If the eyes are emmetropic-orthophoric, these centers are forever at rest; but when there is any form of heterophoria, one of these centers must be ever active during all working hours. Under the guidance of the fusion faculty, each basal center stands ready to act on its muscle whenever there is a condition that would cause diplopia. They may be called fusion centers.

International Clinics, Vol. 2, Fifteenth Series. $2.00. Philadelphia: J. B. Lippencott Co.

This second volume of the International Clinics is one of the best that has been compiled. It covers a wide range of subjects, each replete in itself. It is the result of the work of some of the best clinicians in the world. It is suggestive in etiology, pathology and treatment.

The discussion of some of the rarer forms of disease is very instructive. The subjects are treated briefly but pointedly, well calculated for the busy physician. The volume will be an excellent addition to any physician's library.

A Manual of Organic Materia Medica and Pharmacognosy; An Introduction to the Study of the Vegetable Kingdom and the Vegetable and Animal Drugs Comprising the Botanical and Physical Characteristics, Source, Constituents, Pharmacopœial Preparations, Insects Injurious to Drugs, and Pharmacal Botany. By Lucius E. Sayre, B. S., Ph. M., Dean of the School of Pharmacy; Professor of Materia Medica and Pharmacy in the University of Kansas; Member of the Committee of Revision of the United States Pharmacopœia. Third

Edition. Revised by William C. Stevens, Professor of Botany in the University of Kansas, with 377 Illustrations, the majority of which are from Original Drawings and Photomicrographs. $5.00. P. Blakiston's Son & Co., Philadelphia.

The eighth revision of the United States Pharmacopœia has made it necessary to revise all pharmacognosy. In the latter branch much research work has been done in the last few years, especially in the branch of histology. The advances made in this department alone has added much to this edition. There are many illustrations from original drawings and photomicrographs. The entire field of materia medica has been reviewed in order to add the new drawings, the non-official which are now official, plant constituents and active principles, and to eliminate those which are no longer of service.

The chapter on organic chemicals has been rewritten and a large number of new remedies added. It has been the aim to make this work as practical as possible, only presenting those remedies which are actually prescribed and dispensed as compiled from prescriptions from leading physicians and from the orders from wholesale houses and jobbers.

The author has kept the work as concise as practical. Many of the former articles have been reduced in length so that the necessary enlargement of others should not materially increase the size of the volume. The maximum and minimum dosage is added to instead of the average, as given by the pharmacopœia. In all but a few there has been added to the powdered drugs a description of their characteristics and microscopical elements. The chapter on powdered drugs has been rewritten, giving those things which are of interest and vital importance to student and instructor as well as the professor.

Medical Communications of the Massachusetts Medical Society, Vol. 20, No. 1, 1905. Boston. Printed by David Clapp & Son.

This volume of Medical Communications is a wealth of valuable information and suggestions to both specialist and general practitioner. Each article is of special interest. The list of contributors includes the names of some of the best men in this country. The following are some of the contributions: The Annual Discourse: "Some Facts and Fancies About Mind and Body," by Charles A. Drew, M. D. The Shattuck Lecture: "Some Problems of Intermediary Metabolism," by Russell H. Chittenden, Ph. D.; "An Early Diagnosis of Surgical Disease in the Urinary Organs," by Benjamin Tenny, M. D.; "A Clinical and Laboratory Study of the Therapeutic Value of Hydrochloric Acid in the Diseases of the Stomach," by Richard F. Chase, M. D.; "Methods of Medicine," by Lewellys F. Barker, M. D.

COUNTY SOCIETIES IN AFFILIATION WITH THE STATE MEDICAL ASSOCIATION.

County.	President.	Address of President.	Secretary.	Address of Secretary.
Adair	James Hanks	Brashear	E. C. Grim	Kirksville.
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Atchison	G. W. Lott	Tiesboro	A. McMichael	Rockport.
Audrain	C. A. Rothwell	Mexico	E. S. Cave	Mexico.
Barton	G. D. Allee	Lamar	J. L. McComb	Lamar.
Bates	A. E. Lyle	Butler	E. N. Chastain	Rich Hill.
Benton	G. S. Greeson	Lincoln	S. O. Davis	Warsaw.
Boone	J. E. Thornton	Columbia	W. A. Norris	Columbia.
Buchanan	P. I. Leonard	St. Joseph	Chas W Fassett	St. Joseph.
Butler	W. A. Kendall	Poplar Bluff	J. J. Norwine	Poplar Bluff.
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Camden	G. M. Moore	Linn Creek	G. T. Myers	Macks Creek.
Cape Girardeau	H. L. Cunningham	Cape Girardeau	J. K. Porterfield, Jr.	Cape Girardeau.
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Cass	R. D. Ramey	Garden City	J. S. Triplett	Harrisonville.
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Clay	L. J. Jones	Linden	F. H. Matthews	Liberty.
Clinton	John Sturgis	Perrin	E. A. Colley	Plattsburg.
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Davies	J. D. Dunham	Pattonsburg	M. A. Smith	Gallatin.
Dunklin	N. F. Kelley	Kennett	G. L. Johnson	Kennett.
Franklin	H. A. Booth	Pacific	A. C. Brown	Moselle.
Gasconade-Maries-Osage	J. J. Ferrell	Owensville	J. W. Nieweg	Lois.
Greene	W. P. Patterson	Springfield	Robt. M. Cowan	Springfield.
Grundy	N. E. Sutton	Trenton	W.H.Winningham	Trenton.
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Holt	C. L. Evans	Oregon	J. F. Chandler	Forest City.
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Howell	J. W. Bingham	Pottersville	H. C. Shuttee	West Plains.
Iron	R. W. Gay	Ironton	Ira A. Marshall	Ironton.
Jackson	Robt. T. Sloan	Kansas City	Max Goldman	Kansas City.
Jasper	A. B. Freeman	Joplin	J. T. Stamey	Joplin.
Jefferson	W. H. Farrar	DeSoto	H. Will Elder	DeSoto.
Johnson	M. P. Shy	Knobnoster	E. H. Gilbert	Warrensburg.
Knox	S. S. Brown	Edina.	Henry J. Jurgen	Edina.
Laclede	J. M. Billings	Lebanon	J. A. McComb	Lebanon.
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Macon	W. H. Miller	Macon	C. W. Reagan	Macon.
Madison	G. W. Greenwood	Fredericktown	C. U. Davis	Fredericktown.
Marion	R. H. Goodier	Hannibal	F. Janet Reid	Hannibal.
Mercer	H. P. Chesmore	Princeton	C. R. Buren	Princeton.
Miller	S. P. Hickman	Ulman	G. D. Walker	Eldon.
Mississippi	A. J. Martin	East Prairie	W. P. Howle	Charleston.
Moniteau	J. B. Stewart	Clarksburg	W. R. Patterson	Tipton.
Monroe	S. M. Brown	Monroe City	M. C. McMurry	Paris.
Montgomery	J. L. Jones	Jonesburg	W. M. Wheeler	High Hill.
Morgan	W. L. Hatler	Barnett	J. T. Beale	Versailles.
Newton	J. W. Lamson	Neosho	Horace Bowers	Neosho.
Nodaway	F. R. Anthony	Maryville	L. E. Dean	Maryville.
Pemiscot	D. B. Crowe	Caruthersville	J. G. Luten	Caruthersville.
Perry	T. M. Hudson	Perryville	F. M. Vessells	Perryville.
Pettis	W. C. Overstreet	Sedalia	W. J. Ferguson	Sedalia.
Phelps	W. H. Breuer	St James	W. A. Metcalf	Steelville.
Pike	M. O. Biggs	Bowling Green	T. Guy Hetherlin	Louisiana.
Platte	R. P. Davis	Woodruff	C. C. Coffey	Platte City.
Pulaski	W. L. Ragan	Richland	G. W. Orrick	Crocker.
Putnam	C. H. Carryer	Hartford	T. A. Townsend	Unionville.
Ralls	W. L. Birney	Oakwood	T. J. Downing	New London.
Randolph	G. O. Cuppaidge	Moberly	W. M. Dickerson	Renick.
Ray	Chas. B. Shotwell	Richmond	L. D. Greene	Richmond.
Reynolds	J. M. Lowery	Centerville	T. W. Chilton	Corridon.
Saline	D. C. Gore	Marshall	D. F. Bell	Marshall.
St. Charles	J. R. Mudd	St. Charles	B. K. Stumberg	St. Charles.
St. Clair	W. Cline	Appleton City	E. D. Miles	Osceola.
Ste. Genevieve	M. Andre	St. Genevieve	F. E. Hinch	St. Genevieve.
St. Louis	E. L. Henderson	Century Bldg.	T. A. Hopkins	Century Building.
St. Louis Co.	H. G. Wyer	Kirkwood	H. T. Randle	Clayton.
Schuyler	J. T. Jones	Queen City	H. E. Gerwig	Downing.
Scotland	W. E. Alexander	Memphis	O. F. Pile	Memphis.
Shelby	H. C. Vaughn	Shelbina	A. M. Wood	Lentner.
Stoddard	D. R. Corbin	Bloomfield	Jno. Ashley	Bloomfield.
Sullivan	J. C. Kessenger	Milan	J. S. Montgomery	Milan.
Vernon	H. C. Jarvis	Schell City	T. B. Todd	Richards.
Warren	W. J. Alexander	Marthasville	E. A. Fluesmeier	Wright City.
Washington	J. A. Eaton	Belgrade	W. S. Smith	Belgrade.
Wayne	J. P. Sebastian	Patterson	R. J. Owens	Mill Spring.
Worth	O. H. P. Mills	Grant City	J. K. Phipps	Grant City.

MEETINGS OF COUNTY MEDICAL SOCIETIES.

County.		Date of Meeting.
Adair	Quarterly.	Last Tuesday, Jan., April, July, Oct.
Andrew	Monthly.	First Wednesday.
Atchison	Quarterly.	January, April, July, October.
Audrain	Monthly.	First Monday.
Barton	Quarterly.	First Thursday, May, Aug., Nov., Feb.
Bates	Quarterly.	Last Thursday in Feb., May, Aug. and Nov.
Boone	Monthly.	First Monday.
Buchanan	Semi-Monthly.	First and Third Saturday.
Butler	Weekly.	Fridays.
Caldwell	Quarterly.	July, October, January, April.
Callaway	Monthly.	Second Thursday.
Camden	Quarterly.	Second Monday, April, July, Oct. and Jan.
Cape Girardeau	Monthly.	Second Wednesday.
Carroll	Monthly.	Second Tuesday.
Carter-Shannon	Quarterly.	February, May, August, and November.
Cass	Quarterly.	First Thursday of March, June, Sept. and Dec.
Chariton	Monthly.	Last Thursday.
Clark	Bi-Monthly.	First Mondays, Feb., April, June, Aug., Oct., Dec.
Clay	Monthly.	Last Monday.
Clinton	Monthly.	
Cole	Quarterly.	Second Thursday of Jan., April, July, Oct.
Cooper	Monthly.	First Tuesday.
Crawford	Quarterly.	First Tuesday, April, July, October, January.
Daviess	Quarterly.	January, April, July, October.
Dunklin	Monthly.	Second Tuesday.
Franklin	Monthly.	First Tuesday.
Gasconade-Maries-Osage	Semi-Annual.	Fourth Thursday, April and October.
Greene	Weekly.	Saturday.
Grundy	Quarterly.	July, October, January, April.
Harrison		
Henry	Quarterly.	Second Wednesday, Dec., March, June, Sept.
Holt	Quarterly.	First Thursday, January, April, July, October.
Howard	Monthly.	Third Tuesday.
Howell	Bi-Monthly.	First Thursday of Dec., Feb., April, June, Aug., Oct.
Iron	Monthly.	First Saturday.
Jackson	Semi-Monthly.	Second and Fourth Thursdays.
Jasper	Semi-Monthly.	First and Third Mondays.
Jefferson	Monthly.	Fourth Tuesday.
Johnson	Quarterly.	June, September, December, March.
Knox	Monthly.	First Monday.
Laclede	Quarterly.	Second Monday, Jan., April, July, Oct.
Lafayette	Monthly.	Second Tuesday, Jan., Mch., May, July, Sept., Nov.
Lincoln	Quarterly.	May, August, November, February.
Linn	Quarterly.	October, January, April, July.
Livingston	Monthly.	Third Wednesday.
McDonald	Quarterly.	Second Wednesday, Jan., April, July, Oct.
Macon	Monthly.	Second Tuesday, 10 a. m.
Madison	Semi-Monthly.	First and Third Monday.
Marion	Monthly.	First Friday.
Mercer	Monthly.	Second Thursday.
Miller	Quarterly.	First Thursday, March, June, Sept. Dec.
Mississippi	Monthly.	First Monday.
Moniteau	Quarterly.	March, June, September, December.
Monroe	Quarterly.	First Tuesday of April, July, October, January.
Montgomery	Monthly.	
Morgan	Quarterly.	First Wednesday of March, June, Sept., Dec.
Newton	Monthly.	Second Tuesday.
Nodaway	Monthly.	Second Tuesday.
Pemiscot	Quarterly.	First Tuesday, January, April, July, November.
Perry	Monthly.	First Wednesday.
Pettis	Semi-Monthly.	First and Third Monday.
Phelps	Quarterly.	March, June, September, December.
Pike	Monthly.	
Platte	Monthly.	First Wednesday.
Pulaski	Monthly.	
Putnam	Monthly.	First Wednesday.
Ralls	Quarterly.	January, April, July and October.
Randolph	Monthly.	Second Tuesday.
Ray	Monthly.	Third Wednesday.
Reynolds	Quarterly.	January, March, June, October.
Saline	Monthly.	Second Tuesday.
St. Charles	Monthly.	
St. Clair	Quarterly.	Second Tuesday, March, June, Sept., Dec.
Ste. Genevieve	Monthly.	Second Wednesday.
St. Louis	Weekly.	Saturdays.
St. Louis County	Monthly.	Second Wednesday.
Schuyler	Semi-Annually.	July and December.
Scotland	Monthly.	Second Tuesday.
Shelby	Quarterly.	June, September, December, March.
Stoddard	Quarterly.	First Wednesday, March, June, Sept., Dec.
Sullivan	Monthly.	
Vernon	Quarterly.	First Tuesday, March, June, Sept. and Dec.
Warren	Monthly.	
Washington	Monthly.	First Saturday.
Wayne	Monthly.	
Worth	Monthly.	Second Wednesday.

AMERICAN MEDICAL ASSOCIATION.

Next Annual Meeting at Boston, Mass.

President-Elect: WM. J. MAYO, Rochester, Minn.
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MISSOURI STATE MEDICAL ASSOCIATION.

Next Annual Meeting, Jefferson City, May, 1906.

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COUNCILLOR DISTRICTS AND LIST OF COUNTIES IN EACH DISTRICT.*

First District.—F. B. Hiller, Kahoka. Counties: Clark, Scotland, Schuyler, Adair, Knox, **Lewis.**

Second District.—J. D. Brummall, Salisbury. Counties: Linn, Carroll, Chariton, Livingston, Grundy, Sullivan, Mercer, Putnam.

Third District.—E. H. Miller, Liberty. Counties: Clay, Ray, Platte, Clinton, Caldwell, **DeKalb, Gentry,** Harrison, Worth, Daviess.

Fourth District.—C. H. Wallace, St. Joseph. Counties: Buchanan, Holt, Atchison, Nodaway, Andrew.

Fifth District.—L. W. Dallas, Hunnewell. Counties: Macon, Shelby, Marion, Randolph, Monroe, Ralls.

Sixth District.—Woodson Moss, Columbia. Counties: Audrain, Callaway, Montgomery, Warren, Pike, Boone, Howard, St. Charles.

Seventh District.—W. B. Dorsett, St. Louis. Counties: St. Louis, Lincoln.

Eighth District.—F. J. Lutz, St. Louis. Counties: Franklin.

Ninth District.—B. M. Hypes, St. Louis. Counties: Jefferson, Washington, **St. Francois,** Reynolds, Iron, Perry, St. Genevieve.

Tenth District.—J. J. Norwine, Poplar Bluff. Counties: Mississippi, **New Madrid,** Wayne, Stoddard, Dunklin, Butler, **Ripley,** Carter, Pemiscot.

Eleventh District.—W. D. Porterfield, Jr., Cape Girardeau. Counties: **Bollinger,** Scott, Madison, Cape Girardeau.

Twelfth District.—W. S. Allee, Olean. Counties: Miller, Morgan, Maries, Cole, Moniteau, Camden, Osage, Gasconade.

Thirteenth District.—R. D. Haire, Clinton. Counties: Pettis, Lafayette, Henry, St. Clair, Benton, Saline, **Hickory,** Cooper.

Fourteenth District.—M. P. Overholser, Harrisonville. Counties: Jackson, Cass, Bates, Johnson.

Fifteenth District.—A. R. Snyder, Joplin. Counties: McDonald, Newton, Jasper, **Dade,** Barton, **Cedar,** Vernon.

Sixteenth District.—R. L. Johnson, Rolla. Counties: **Dallas,** Crawford, Phelps, Pulaski, Laclede, **Dent.**

Seventeenth District.—J. E. Tefft, Springfield. Counties: Greene, **Christian, Stone, Barry, Lawrence, Webster, Polk, Taney.**

Eighteenth District.—H. C. Shuttee, West Plaines. Counties: **Ozark, Oregon,** Howell, **Texas, Wright, Shannon, Douglas.**

*Counties in **black type** are unorganized.